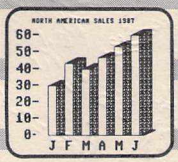
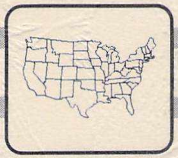
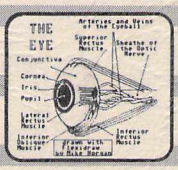
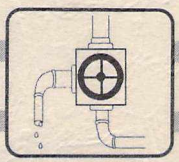
Flexidraw™

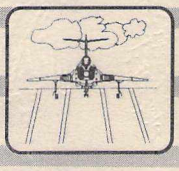
AN INTERACTIVE GRAPHICS SOFTWARE PROGRAM
FOR YOUR COMMODORE 64, 64C, SX64, OR 128 COMPUTER

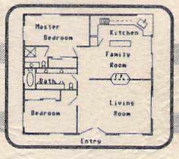


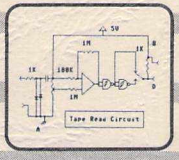


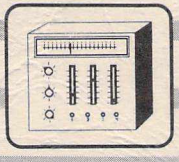


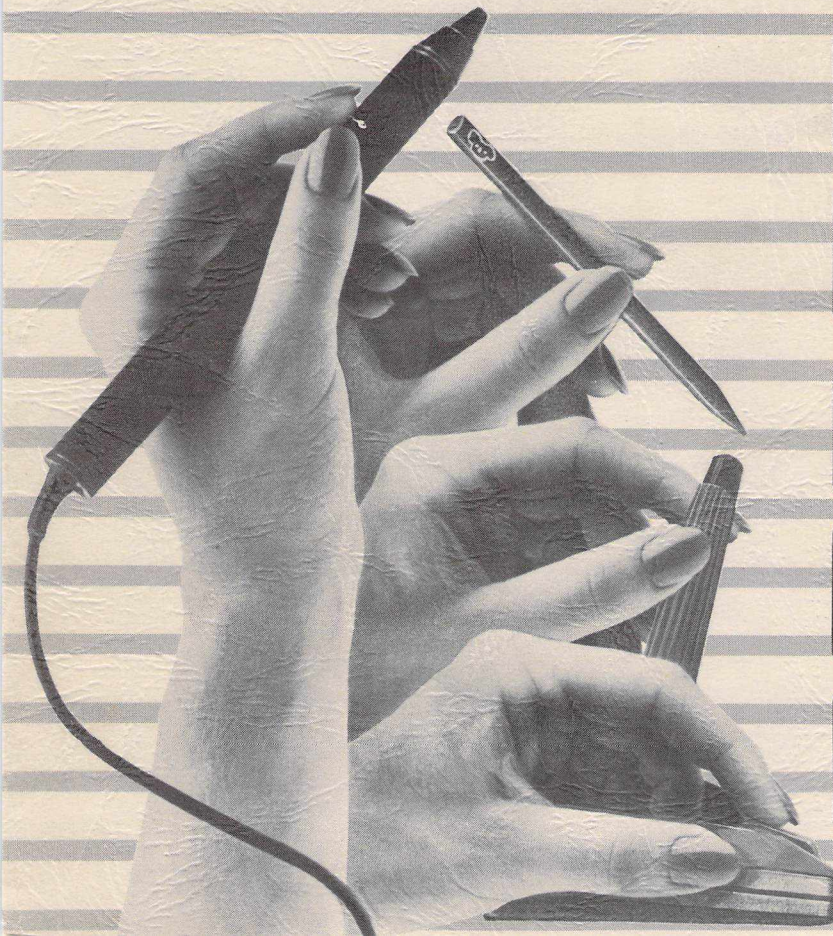












PLEASE READ BEFORE USING FLEXIDRAW 5.5

This package contains a copy of the above-named computer program recorded on one or more (sides) of a magnetic diskette(s), and supporting documentation.

This material embodies proprietary rights protected under the U.S. Copyright laws and the trade secret laws of most states.

Your purchase of this package is subject to the following terms and conditions:

Purchaser acquires full title and possession of the diskette(s), and a limited, non-exclusive license to load the copy of the computer program into a personal microprocessor and to make one archival or Working Copy of it on a spare diskette(s).

Purchaser is not authorized to make any other copy of the computer program, to transfer possession of any copy of the program to another person, to load a copy of the program on any multi-user system or use it in rendering any kind of software-related services which might result in copying by other persons, to modify and/or adapt the computer program in any way including translating, reverse engineering, decompiling or disassembling the computer program.

Violation of any of the above terms and conditions may subject the purchaser or any other person to civil liability and actual or statutory damages under Title 17 and 28 of the U.S. Code. Willful violation of the Copyright Law is a felony punishable by heavy fines and/or imprisonment.

• LIMITED WARRANTY NOTICE

INKWELL SYSTEMS warrants the diskette(s) as free of defect in material and workmanship, and the recorded copy of the computer program as an accurate copy of the original for a period of 90 days from the date of purchase.

• EXCLUSIVE REMEDIES

Items found defective and returned to INKWELL SYSTEMS during their warranty period will be repaired or replaced free of charge; providing that the applicable WARRANTY REGISTRATION CARD is on file at INKWELL SYSTEMS .

NOTICE: WARRANTY REGISTRATION CARD MUST BE ON FILE AT INKWELL SYSTEMS FOR WARRANTY COVERAGE, TO RECEIVE TECHNICAL SUPPORT AND TO RECEIVE PRODUCT UPDATE INFORMATION IF APPLICABLE.

• EXCLUSION

The computer program is made available to you "AS IS". NO WARRANTY EITHER EXPRESSED OR IMPLIED IS MADE AS TO ITS APPLICATION OR FITNESS FOR ANY PURPOSE. IN NO EVENT WILL INKWELL SYSTEMS, ITS LICENSORS OR ASSOCIATES BE HELD LIABLE FOR ANY TYPE OF DAMAGES RESULTING FROM ANY DEFECT IN THE COMPUTER PROGRAM OR FROM ANY USE OR ATTEMPT TO USE IT.

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• COPYRIGHT AND TRADEMARK INFORMATION

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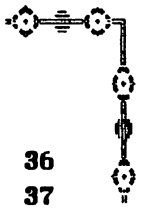

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WELCOME TO FLEXIDRAW 5.5™

Your FLEXIDRAW package contains the following items:

- **FLEXIDRAW 5.5 DOUBLE-SIDED MASTER DISK**
- **FUNCTION KEY OVERLAYS**
- **OPERATIONS MANUAL**
- **WARRANTY CARD**

If this package is not complete, immediately return it to the place of purchase.

The FLEXIDRAW 5.5 Master Disk is double-sided:

SIDE1: PROGRAM DISK contains: **FLEXIDRAW 5.5, PEN PALETTE, TRANSGRAPH, SHOW PICTURE, FLEXIPLOT, COPY FLEXIDRAW, font files and clip art pictures, and the COMMODORE 1520 and SWEET-P PLOTTER DUMP Programs.**

SIDE 2: PICTURE DISK contains: **Symbol library files, picture files, PEN PALETTE TUTOR 1-5, THE FOUR SEASONS,** (a continuously running demonstration of the drawing, color and color animation capabilities of FLEXIDRAW), **SPRITE EDITOR,** and **SPRITE ANIMATOR.**

PLEASE NOTE: While the FLEXIDRAW and PEN PALETTE Programs work with various input devices, it is necessary to operate SHOW PICTURE, SPRITE EDITOR and SPRITE ANIMATOR with a light pen. The other programs featured on the disk do not require the use of anything other than the keyboard.

To get started using your new program, we recommend that you read the *entire* manual first. All programs on the PROGRAM Disk are accessed by typing:

LOAD "*",8 <RETURN>
RUN <RETURN>.

IMPORTANT: WARRANTY REGISTRATION CARD MUST BE ON FILE AT INKWELL SYSTEMS FOR WARRANTY COVERAGE AND TO RECEIVE NOTIFICATION OF AND BE ABLE TO PURCHASE SOFTWARE UPDATES WHEN AVAILABLE.

PLEASE SEND IN YOUR WARRANTY CARD NOW!

WARRANTY INFORMATION

Your FLEXIDRAW diskette is warranted for 90 days. If you do experience any problems with it:

- **DURING THE WARRANTY PERIOD**

Contact the factory for an RMA # (Return Merchandise Authorization) *before* returning the diskette to INKWELL SYSTEMS. **Then** return the damaged disk. You will receive a replacement disk at no charge if the original diskette is found to be faulty.

- **AFTER THE WARRANTY EXPIRES**

Contact the factory for an RMA # (Return Merchandise Authorization) *before* returning the diskette to INKWELL SYSTEMS. **Then** return the damaged disk along with $8.00 ($10.00 US in Canada and other foreign countries). You will be sent a replacement.

QUESTIONS? Check with your nearest Flexidraw Dealer, or contact:

Customer Service
INKWELL SYSTEMS

P.O. Box 1997
Imperial Beach, CA 91933
(619) 429-6093

HARDWARE REQUIREMENTS

To use the programs on your FLEXIDRAW Master Disk, you must have the following equipment:

- **COMMODORE 64, 64C, 128 or SX64 Microcomputer**
- **COMMODORE 1541 or 1571 Single Disk Drive, MSD Dual Disk Drive or 1541 compatible Disk Drive (single or dual)**
- **Television set or Monitor, preferably with audio input**
- **Two blank 5 1/4" Floppy Disks**
- **Data Input Device: INKWELL SYSTEMS 170-C or 184-C LIGHT PEN, KOALA PAD, SUNCOM ANIMATION STATION PAD or equivalent, 1351 MOUSE (or equivalent), COMMODORE compatible Joystick.**

Optional hardware currently supported by FLEXIDRAW:

BLACK & WHITE PRINTERS

BMC
Commodore 1525, MPS-801
Commodore 1526, MPS-802
C. Itoh Prowriter 8510, 1550, 7500
Epson MX/FX/RX Series
Gemini 10/10X/15/15X
Legend 880

Mannesmann-Tally Spirit 80
Okidata Microline 84/92/93
Panasonic KX-P 1090, 1091
Radix 10, 15
Riteman
Siekosha GP550
Smith Corona D100, D200
Star Micronics STX-80, SL10-C

COLOR PRINTERS

Canon PJ-1080A Inkjet
C. Itoh Prowriter 8510SC
Diablo C150 Inkjet
Okidata Okimate 10, 20
Quadram QJ-9000 Quadjet

PLOTTERS

Commodore 1520
Enter Computer Sweet-P

MODEMS

Commodore 1600 VicModem
HES1
Westridge Modem

PRINTER INTERFACES

Cardco A, B, G,+G or G-WIZ
Skyles Electric VicTree Cable
Progressive Peripherals & Software
Easy Print
Microworld MW302, MW350
Orange Micro Grappler
Xetec
Turbo Print

Printer and Printer Interface switch settings are discussed in the *PRINTING YOUR PICTURES* section of this manual. For printers not listed see the *PRINTING YOUR PICTURES* section of this manual for printer equivalents or contact INKWELL SYSTEMS Customer Service for more information.

GETTING STARTED

Set up the computer, the disk drive, a black & white or color television or a monitor, the data input device of your choice and optional printer, printer interface, or modem as described in their respective owner's manuals.

Find the section in this manual entitled *PRINTING YOUR PICTURES* and make the necessary switch settings on any printers and/or printer interfaces.

Turn on the monitor, the disk drive, the printer (if installed) and finally, the computer.

At this time, if you have not made a Working Copy of your FLEXIDRAW double-sided Master Disk, please do the following:

MAKING WORKING COPIES

To protect your FLEXIDRAW Master Disk, you should make Working Copies of both sides of the Master Disk and then store your Master Disk in a safe place. Use the Working Copy to load FLEXIDRAW, or the other PROGRAMS or PICTURES and use additional formatted disks to store pictures you wish to save.

To make Working Copies of the FLEXIDRAW Master Disk, follow the instructions above for *GETTING STARTED*. You will need 2 blank diskettes.

PLEASE NOTE: The Master Disk is referred to as The Source Disk on the screen prompts of the COPY FLEXIDRAW Program and the blank disk (which will become the Working Copy) is referred to as the Destination Disk.

To bring up the System Menu, insert the FLEXIDRAW Master Disk, PROGRAM side up and type:

LOAD"*",8 <RETURN>
RUN <RETURN>

Use the Cursor Control Keys to position the selection highlighter over the choice **COPY FLEXIDRAW**. <RETURN>

Follow the screen prompts and insert the Source Disk. Colors will flash and the screen will show the message:

DISK ERRORS:

...MAKING WORKING COPIES

CONTINUED

Insert the Destination Disk and press <RETURN>.

Formatting the Destination Disk takes 10 seconds. For the copy portion, follow the screen prompts to swap disks two more times.

Upon completion the screen prompt will say:

BACKUP COMPLETE, REMOVE DISK.

After making the Working Copy of the PROGRAM side of your Master Disk, repeat the process for the PICTURE side of the Master Disk.

The COPY FLEXIDRAW Program also automatically formats blank disks. After the copy procedure is complete, remove your disk and reboot your FLEXIDRAW Program. Always use your Working Copy.

You may use this copy feature for all non-copy protected disks you wish to duplicate.

DO'S AND DON'TS

Do: MAKE WORKING COPIES OF BOTH SIDES OF YOUR FLEXIDRAW MASTER (SOURCE) DISK AS DESCRIBED IN THE *MAKING WORKING COPIES* SECTION OF THIS MANUAL.

Do: SET PREFERENCES.

Do: Adjust the Color, Brightness, and Contrast controls of your television or monitor for the best possible display.

Do: Contact your INKWELL SYSTEMS Dealer if you have any questions.

Don't: Turn the disk drive on or off when the disk is inside.

Don't: Save your pictures on the FLEXIDRAW Master Disk. Use new, formatted diskettes for your picture files.

Don't: Return merchandise to INKWELL SYSTEMS without **FIRST** obtaining an RMA* as described in the *WELCOME TO FLEXIDRAW 5.5.* section of this manual.

LOADING THE SYSTEM MENU

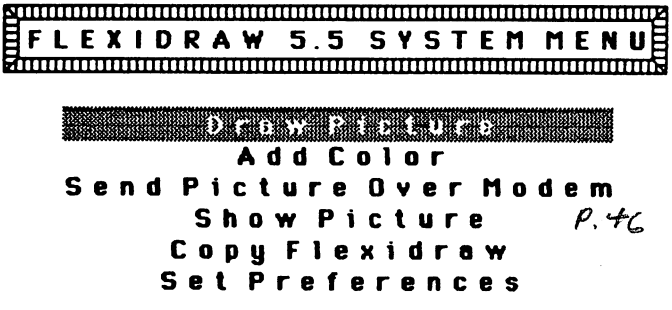
Insert a Working Copy of the FLEXIDRAW PROGRAM Disk into the disk drive. To use one of the programs on the disk, type:

LOAD "*",8 <RETURN>

After the **READY** prompt is returned, type:

RUN <RETURN>

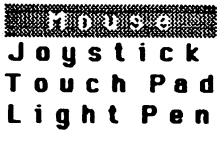
The screen will display:



To make a program selection, use the Cursor Control Keys to position the highlighter bar over your choice, then press <RETURN>.

If you have chosen **DRAW PICTURE** or **ADD COLOR**, your next menu selection will be to determine what your primary input device will be:

Select Input Device:



When using this program for the first time, choose SET PREFERENCES. See the *SET PREFERENCES* section in this manual for information regarding the procedures for doing this.

Proceed to the section in the manual for the particular program you have chosen.

SET PREFERENCES

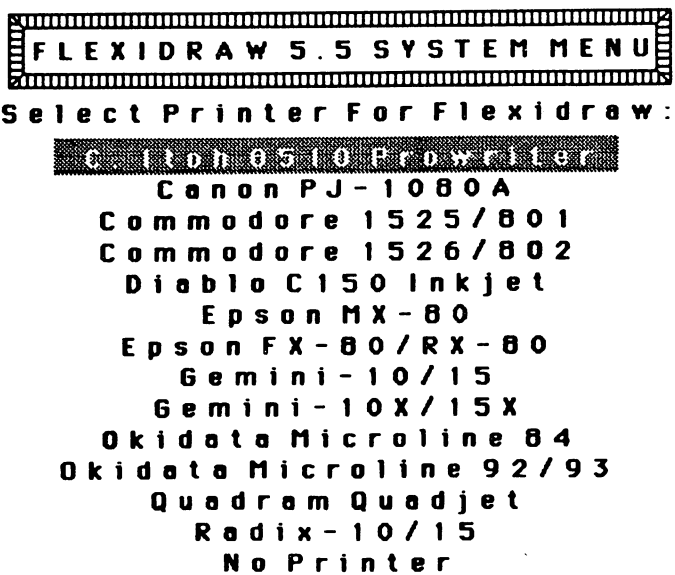
This menu selection allows you to add black and white and/or color printer configurations for both the FLEXIDRAW and PEN PALETTE Programs onto your PROGRAM Working Copy Disk just *once* and it will be ready to use each time you use your program. If you should wish to change printers at a later date, choose **SET PREFERENCES** again and make your new selections. Please refer to the *PRINTING YOUR PICTURES* section of this manual to assist you in choosing the correct printer information.

If you are using a printer which does not appear on the screen, please refer to the Equivalent Printer Chart in the *PRINTING YOUR PICTURES* section of this manual.

PLEASE NOTE: SET PREFERENCES will only work on a non-write-protected disk. After the printer information is written onto the disk, you may then use a write-protect tab for the protection of your PROGRAM Working Copy. If you wish to change the printer information at a later date, you must choose **SET PREFERENCES**, remove the write-protect tab, and replace it once the change is made.

- **TO SET PREFERENCES**

Choose **SET PREFERENCES** from the System Menu. The following screen will appear:



Choose your printer or its equivalent from the list. Then follow the screen prompts to give the computer additional information. The program will then return to the System Menu and you may choose the program you wish to run.

INTRODUCTION TO THE FLEXIDRAW DRAWING PROGRAM

The FLEXIDRAW Drawing Program is an easy-to-use, menu-driven graphics program for the Commodore 64, 64C, SX64 and 128 (in the 64 mode).

With FLEXIDRAW, you can go from freehand sketching and airbrush effects, through more sophisticated functions such as curves and rubberbanded lines.

Drawings may incorporate symbols and text using the 10 font styles and symbol libraries found on the FLEXIDRAW Master Disk. Finished pictures may be saved to disk or printed.

COPY and **PASTE** features allow images to be rotated, flipped and duplicated. Symbol Libraries are included to assist in building electronic schematics, architectural drawings or displaying math and scientific expressions.

Pictures generated with the FLEXIDRAW Program may be painted in color using PEN PALETTE, or transmitted by modem to a remote location via TRANSGRAPH.

FLEXIDRAW may be combined with other hardware or software programs to enhance drawings even further. Drawings may also be videotaped for presentations as well as displayed in black and white or color with the menu hidden by using The Light Pen and SHOW PICTURE.

Step-by-step instructions follow to guide you through the menu functions and drawing procedures.

- **USING DIFFERENT DATA INPUT DEVICES IN FLEXIDRAW**

Original FLEXIDRAW 170-C Light Pen: Insert The Light Pen in Control Port 1 which is located on the right side of the Commodore 64, 64C, and 128 computers and in the rear of the SX64 portable. Use the <BACK ARROW> Key to "set a point". Press the tip of The Light Pen to the CRT to perform drawing and Cursor Arrow positioning functions.

INKWELL SYSTEMS 184-C Light Pen: Either the Front Touch Pad (located closest to the pen tip) or the <BACK ARROW> Key is used to "set a point". The Rear Touch Pad is used for drawing and positioning the Cursor Arrow on the screen. While it is not necessary for the tip of this pen to be placed directly on the screen, it is recommended that you use the pen no more than three

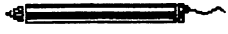
...INTRODUCTION TO THE FLEXIDRAW DRAWING PROGRAM

...INKWELL SYSTEMS 1B4-C Light Pen:
inches from the screen for optimum operation. Insert The Light Pen in Control Port 1 which is located on the right side of the Commodore 64, 64C, and 128 computers and in the rear of the SX64 portable.

COMMODORE 1351 MOUSE: The Left Button is used in place of the <BACK ARROW> Key to "set a point". The Right Button is used for drawing and positioning the Cursor Arrow on the screen. The Mouse is installed in Port 2 which is located on the right side of the Commodore 64, 64C, and 128 computers and in the rear of the SX64 portable.

JOYSTICK: Use the <BACK ARROW> Key to "set a point". Move the Joystick while holding down the "Fire" button to draw and position the Cursor Arrow on the screen. The Joystick is installed in Port 2 which is located on the right side of the Commodore 64, 64C, and 128 computers and in the rear of the SX64 portable.

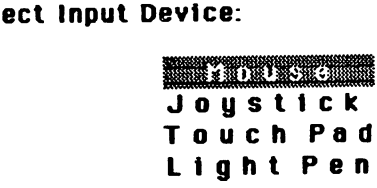
DATA TABLET OR PAD: Either of the Upper Buttons may be used in place of the <BACK ARROW> Key to "set a point". Hold either of the Lower Buttons while using the stylus or your finger on the Pad for drawing and positioning the Cursor Arrow on the screen. For best results, remember to release the Lower Button *before* lifting the stylus or your finger from the Pad. The Pad is installed in Port 2 which is located on the right side of the Commodore 64, 64C, and 128 computers and in the rear of the SX64 portable.



LOADING FLEXIDRAW

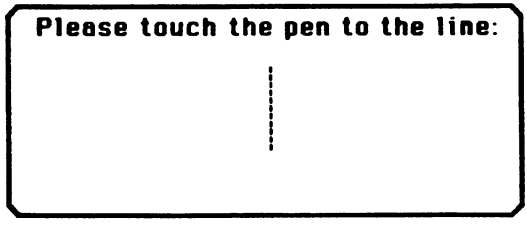
Follow the instructions in the *SET PREFERENCES* and *LOADING THE SYSTEM MENU* sections of this manual to load your printer information and bring up the System Menu. Select **DRAW PICTURE** with the highlighter bar.

The next screen to appear will ask you for your data input device:



If you have The Light Pen and plan on using it during the course of your drawing: Choose **LIGHT PEN** with the highlighter bar and press <RETURN>. The FLEXIDRAW Program will load into your computer.

The next screen to appear will say:



This screen is used to calibrate The Light Pen to your system. **For the 170-C,** press the tip of The Light Pen to the line on the screen. **For the 184-C,** touch the Rear Touch Pad of The Light Pen and hold the tip to the line on the screen for just a second. Remove the pen tip or lift your finger and the FLEXIDRAW Work Screen will appear.

If your pen fails to calibrate, increase the brightness level of the screen and try recalibrating the pen. If the problem persists, check the pen tip for accumulation of dust.

PLEASE NOTE: To recalibrate the system to the light pen at any time while running FLEXIDRAW:

1) Press <RUN/STOP> and <RESTORE> at the same time.
2) Recalibrate as described above. (Both of the Work Screens will be cleared.)

...LOADING FLEXIDRAW

If you do not hove The Light Pen, choose your data input device with the highlighter bar, then press <RETURN>. The FLEXIDRAW Program will load into your computer and the Work Screen will appear.

ONCE IN THE FLEXIDRAW DRAWING PROGRAM YOU MAY CHANGE DATA INPUT DEVICES BY HOLDING DOWN THE <COMMODORE> AND <SHIFT> KEYS WHILE PRESSING <M> FOR MOUSE, <J> FOR JOYSTICK, <L> FOR LIGHT PEN OR <P> FOR DATA TABLET OR PAD.

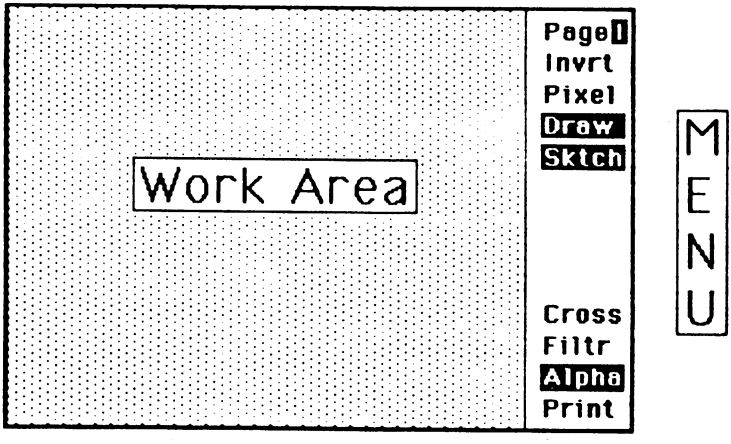
Two devices may be connected to the computer at one time. **The Light Pen is always used in Port 1.**

FLEXIDRAW features a "dynamic" menu that will display only those modes and commands which may be used at a given time. While experimenting with the menu selections please note that repeatedly touching a particular menu position may cause other menu selections to appear or disappear.

While experimenting with the menu commands, note that the pens or the data input device cursor must be placed to the far right of the menu selection word to activate it.

USING FLEXIDRAW

- **FLEXIDRAW WORK SCREEN:**



- **GLOSSARY OF SYMBOLS:**

Make selection with data input device here.

↙ Graphics cursor, Grid Mode.

Key to press.

\+ Start Point Marker.

MODE Menu option.

Text Cursor, Grid Mode.

- **MENU MODE SEQUENCE:**

Select the same menu position repeatedly with your data input device to toggle through modes.

Page1 → Page2 → Page1

Pixel → Grid → Pixel

Draw → Point → Rubbr → Draw

Sktch → Spray → Sktch

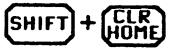
Alpha → Font1 → Font2 → Symbl → Alpha

...USING FLEXIDRAW

• FLEXIDRAW SPECIAL KEYS

To erase one character block at a time, press the Left <SHIFT> Key and.
...the Rear Touch Pad of the 184-C Light Pen while drawing.
...press the nose-tip of the 170-C Light Pen while drawing.
...the right button of the Mouse while drawing.

To erase one character block at a time, press the <SHIFT LOCK> Key and:
...the bottom button of the Touch Pad while drawing.
...the Fire Button of the Joystick while drawing.



Clears the current Work Area.

Sets a Start Point or draws a line. (See *SETTING A START POINT* and *POINT-TO-POINT LINES* in the *USING FLEXIDRAW* section of this manual.

May be held instead of pressing the 170-C nose-tip to the screen for freehand sketching or airbrushing effects.

Used to select **Split** screen direction and may be pressed instead of using the data input device to position the Graphics Cursor **Pixel**, **Point** or **Rubbr** mode

Clears both Work Areas and may be used to restart FLEXIDRAW to recalibrate The Light Pen.

May be held when in **Rubbr** mode to create a fan effect.

Used to OOPS!/UNDO a **Fill**, **Line**, **Box**, **Circl**, **Ellps**, **Arc**, **Paste**, text or changes made in **Zoom** (after returning but before performing any other operation).

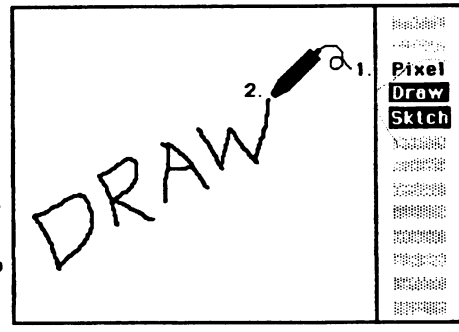
Used to Abort: **Fill** or **Edges** or **Print** in progress, a **Fill** or **Shade** while a a Fill Pattern Menu is displayed, a Start Point, a **Split** selection; or a **Print** while **1X 4X** is displayed on the menu.

• FREEHAND SKETCHING

1) Set [Pixel] [Draw] [Sktch]

2) Draw on the Work Area using your data input device as described in the *INTRODUCTION TO THE FLEXIDRAW DRAWING PROGRAM* section of this manual.

HINT: For 170-C Light Pen users: As a drawing alternative, use the [CTRL] key instead of pressing the nose-tip of the pen to the screen.

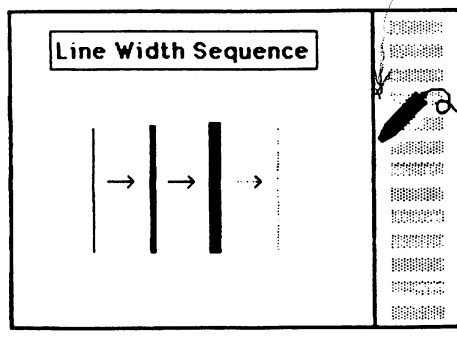


• CHANGING LINE THICKNESS

1) Use your data input device to select anywhere along the right edge of the dividing line between the Work Area and the Menu.

2) Choose this repeatedly to toggle through the different line widths.

This line width selection applies to all drawing modes and remains as selected until changed.



• ERASE

To erase one character block at a time, press the Left [SHIFT] Key and.
.....the Rear Touch Pad of the 184-C Light Pen while drawing.
.....press the nose-tip of the 170-C Light Pen while drawing.
.....the right button of the Mouse while drawing

To erase one character block at a time, press the [SHIFT LOCK] Key and.
.....the bottom button of the Touch Pad while drawing.
.....the Fire Button of the Joystick while drawing.

...USING FLEXIDRAW

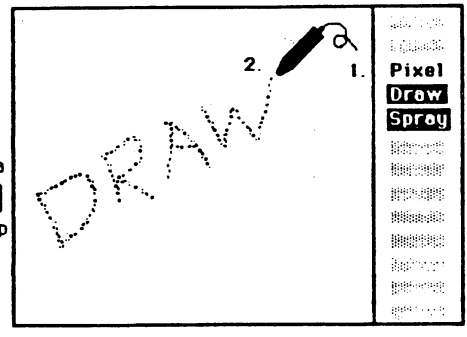
• AIRBRUSH EFFECT

1) Set Pixel Draw Spray

2) Airbrush on the Work Area by drawing with the same techniques that you use with your data input device.

HINT: For 170-C Light Pen users: As a drawing alternative, use the CTRL key instead of pressing the nose-tip of the pen to the screen.

To vary the Airbrush effect, experiment with Filtr. See *SMOOTH DRAWING*.



• SMOOTH DRAWING

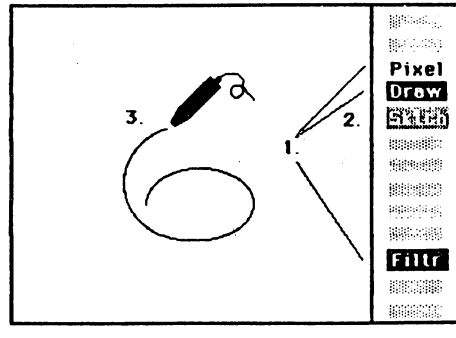
1) Set Pixel Draw Filtr

2) Choose Sktch or Spray.

3) Draw on the Work Area.

4) To turn off Smooth Drawing, touch Filtr again to display Filtr

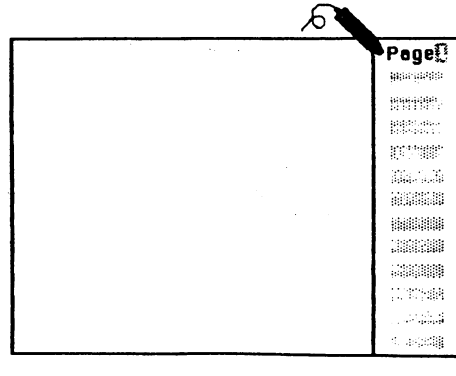
PLEASE NOTE: While in Filtr, response time may be slower.



• CHANGE WORK AREA

FLEXIDRAW has two separate Work Areas, Page1 and Page2

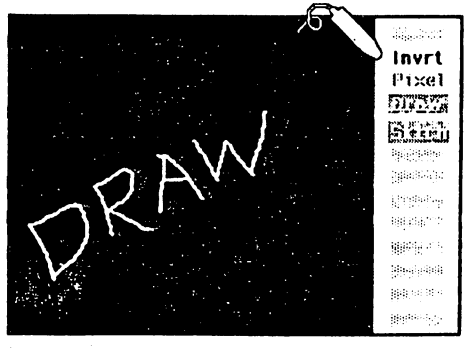
To toggle between them, select Page



• CLEARING THE WORK AREA

Press SHIFT + CLR HOME

• INVERT WORK AREA



1) Select Invrt

Light areas become dark, dark areas become light.

Drawing may be done in light areas only.

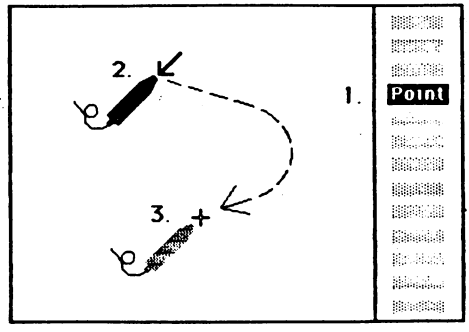
• ERASING WITH INVERT

1) Set Pixel Draw Sktch or Spray
2) Select Invrt.
3) If Sktch, select Line Width.
4) Draw over the light areas you wish to erase.
5) Select Invrt again to resume normal operation.

• SETTING THE START POINT

Set a Start Point *before* drawing point-to-point lines, boxes, curves,or performing copy or shading functions.

1) Set Point or Rubbr ↙will appear.
2) Move ↙with your data input device to the desired starting point.
3) Press ← or the appropriate pad or button designated to Set a Point on your data input device. + will appear to mark the Start Point.



...USING FLEXIDRAW

- **ABORTING THE START POINT**

Press (RUN STOP) when + is on the screen.

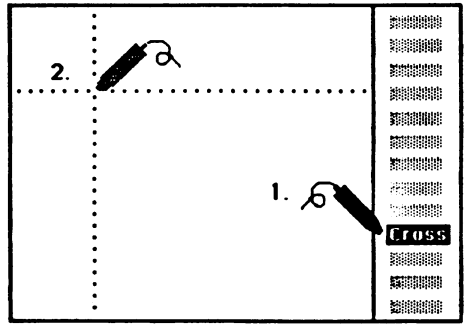
- **CROSSHAIRS**

The Crosshairs are an aid for aligning drawings and text or for positioning previously Copied objects to be Pasted.

Crosshairs are active in all drawing modes and may be used in either [Pixel] or [Grid].

1) Set [Cross].
2) Crosshair intersection will track the data input device or may be positioned with the Cursor Control Keys.

To turn off, select [Cross] again to display [Cross].

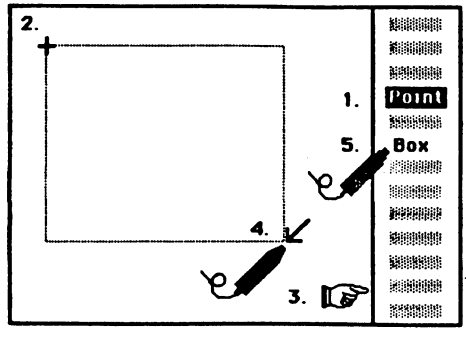


- **BOXES**

1) Set [Point].
2) Set a Start Point + at one corner of Box.
3) Check Line Width.
4) Move ↙ to opposite corner of Box.
5) Select [Box].

- **TO UNDO A BOX**

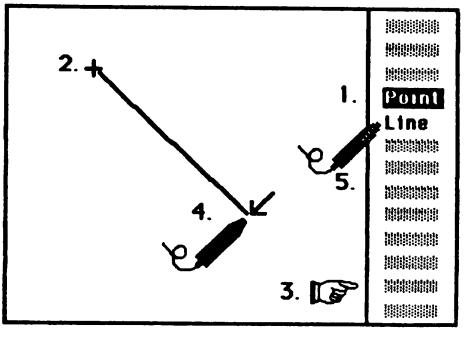
Press (RUN STOP) before performing another function.



• POINT-TO-POINT LINES

1) Set Point.
2) Set Start Point +.
3) Check Line Width.
4) Move ↙ to end point of desired line.
5) Select Line to draw a line *or*

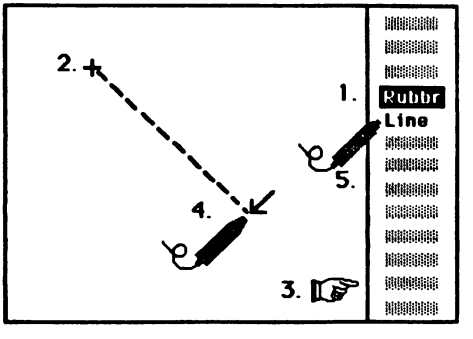
SHORT CUT: Press ⬅ or the appropriate pad or button designated to Set a Point on your data input device.



• RUBBERBANDING LINES

1) Set Rubbr.
2) Set Start Point +.
3) Check Line Width.
4) Drag ↙. Rubberbanding Line will stretch from + to ↙ while dragging.
5) Select Line to lock line in place *or*

SHORT CUT: Press ⬅ or the appropriate pad or button designated to Set a Point on your data input device.



PLEASE NOTE: No Page Change or Split Screen function is allowed during Step 4.

HINT: Hold CK while moving ↙ in either Pixel or Grid to produce interesting effects.

• ABORTING POINT-TO-POINT OR RUBBERBANDED LINES

Press RUN STOP when + is on the screen.

...USING FLEXIDRAW

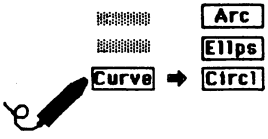
• TO UNDO POINT-TO-POINT OR RUBBERBAND LINES

Press RUN STOP before performing another function.

• CURVES

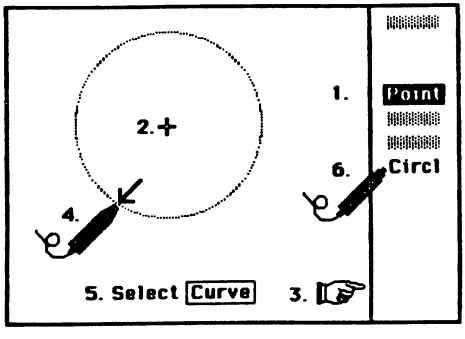
Three curve functions (Circle, Ellipse and Arc) are available after setting a Start Point + and selecting Curve.

The menu will display your options.



• CIRCLES

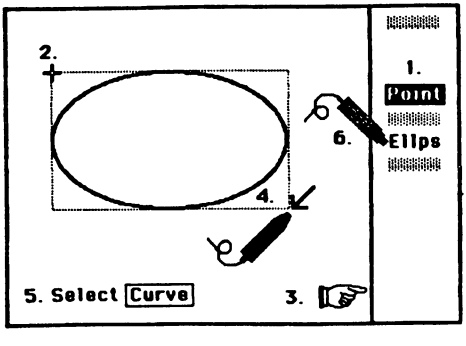
1) Set Point.
2) Set Start Point + at the center of the circle.
3) Check Line Width.
4) Move ↙ to a radius of the circle.
5) Select Curve.
6) Select Circl.



• ELLIPSES

An Ellipse is defined as a curve touching all four sides of an imaginary box.

1) Set Point.
2) Set Start Point + at one corner of the imaginary box.
3) Check Line Width.
4) Move the ↙ to the opposite corner of the imaginary box.
5) Select Curve.
6) Select Ellps.



- **ARCS**

1) Set Point.

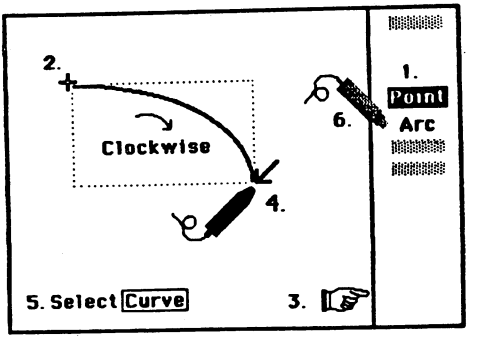
2) Set Start Point +.

3) Check Line Width.

4) Move the ↙ *clockwise* to the end if the arc. (See example).

5) Select Curve.

6) Select Arc.



- **TO UNDO ANY CURVE**

Press RUN STOP before performing another function.

- **ZOOM**

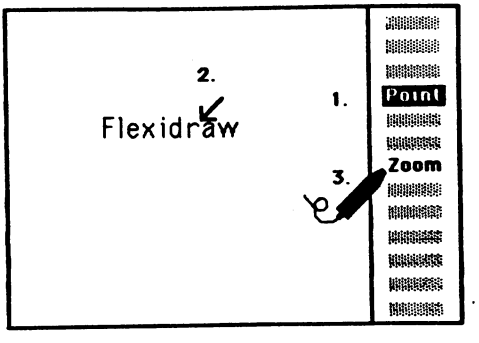
The Zoom feature is used to make single pixel changes more convenient by increasing pixel size to a character block.

1) Set Point or Rubbr..

2) Move ↙ to the approximate area to be changed.

3) Select Zoom.

Single pixels will be magnified to character block size for easy editing.



...USING FLEXIDRAW

• ZOOM SCREEN COMMANDS

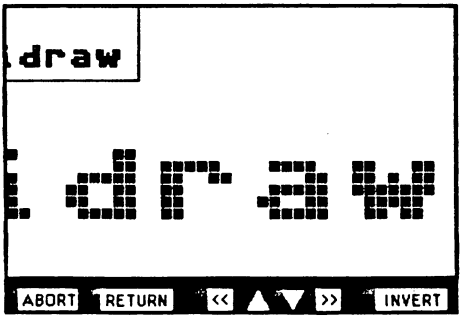
DRAW: Use your data input device in its prescribed manner.

ERASE: Follow the instructions in the *ERASE* section of this manual or choose [invrt] and undraw.

SCROLL: Use [<<] [▲] [▼] [>>] to move the Zoom Screen over your drawing in any direction.

TURN POSITIONING GRID ON/OFF: Press [f1].

SEND REFERENCE WINDOW TO OTHER SIDE OF SCREEN: For The Light Pen *only*, select the window.



• USING CURSOR CONTROL KEYS

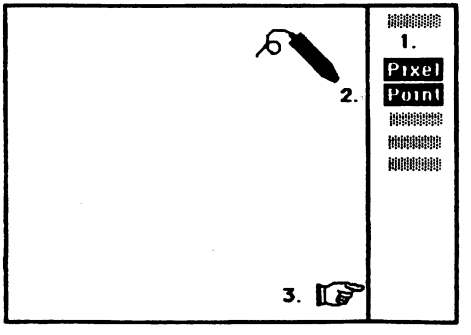
Use the Cursor Control Keys as an alternative to your data input device for positioning the graphics cursor.

HINT: Use the Cursor Control Keys for single pixel positioning in [Paste] and for positioning the Graphics Cursor over dark areas.

1) Set [Pixel].
2) Choose [Point] or [Rubbr].
3) Check Line Width.
4) Press [Crsr ↑↓] to move down.

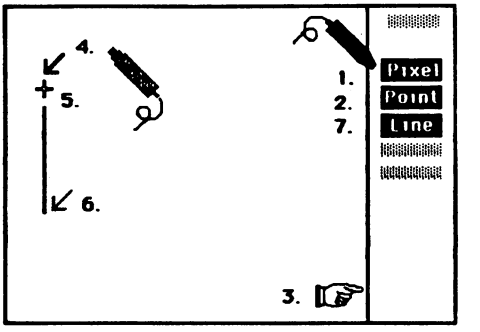
Press [SHIFT] + [Crsr ↑↓] to move up. Press [Crsr ←→] to move right.

Press [SHIFT] + [Crsr ←→] to move left.



• DRAWING STRAIGHT LINES WITH CURSOR CONTROL KEYS

1) Set Pixel.
2) Set Point or Rubbr.
3) Check Line Width.
4) Move ↙ to desired starting point.
5) Set Start Point +.
6) Use Crsr ↕ Crsr ↔ to move ↙ to desired end point.
7) Select Line or press ← or its equivalent on your data input device.



HINT: Use Cross for more accurate alignment.

• TO ERASE USING CURSOR CONTROL KEYS

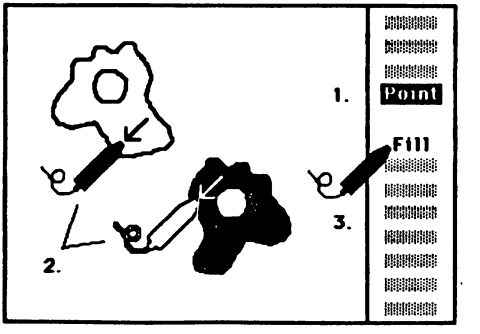
Select Invrt and undraw lines using Cross as a guide.

• FILL

To fill a completely enclosed black or white area with the opposite color:

1) Set Point or Rubbr.
2) Move ↙ into the area you wish to fill.
3) Select Fill. Pattern menu will be displayed.
4) Select Fill again to fill a black area with white or a white area with black.

HINT: Use Zoom to check outline for breaks to avoid leaks.



• TO ABORT A FILL IN PROGRESS

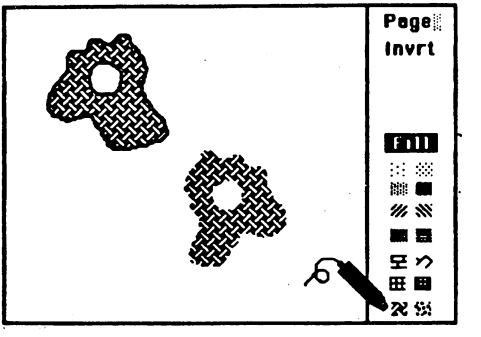
Press RUN STOP.

...USING FLEXIDRAW

• FILLING WITH PATTERNS

You can either fill an area or object in solid black or white, as described in the *FILL* section, or choose a pattern.

1) Set Point or Rubbr.
2) Move ↙ into the area you wish to fill.
3) Select F111. Pattern menu will be displayed.
4) Select a pattern on the Pattern Menu.



OR Select Invrt before choosing the pattern on the Pattern Menu for a reversed color effect.

OR Press any KEY or SHIFT + KEY or the C= + KEY on the Keyboard. The pattern to appear will correspond to the Keyboard in conjunction with the text mode currently being displayed in the menu area. (See the sections on *ALPHANUMERICS*, *USING THE PATTERN FONT* and *USING THE COMMODORE FONT AND SYMBOL SET*).

• ABORTING A PATTERN SELECTION

Press RUN STOP when Pattern Menu is on the screen.

• OOPS! / UNDO

You may OOPS!/UNDO an operation and restore the original picture by pressing RUN STOP in any of the following situations:

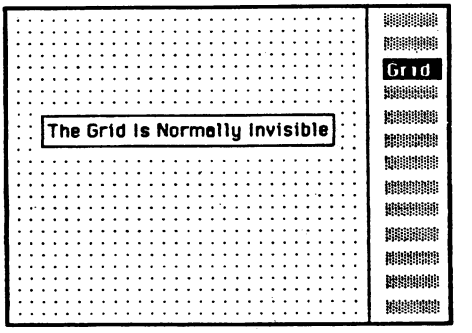
1) While a Fill is in progress.
2) Immediately after the following operations and *before* performing any other operation:
   - Fill/Shade
   - Point-To-Point Lines
   - Rubber Band Lines
   - Box
   - Curve (Circle, Arc, Ellipse)
   - Paste
   - Text
   - Changes made while in the Zoom mode (after returning to the regular screen)

- **GRID**

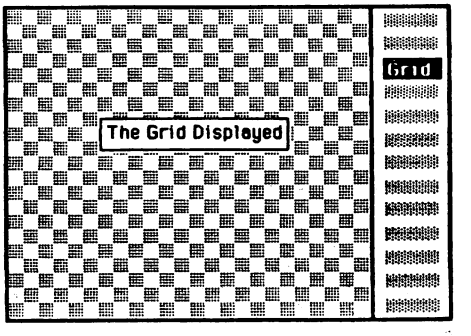
Many of the functions performed in FLEXIDRAW require the Grid mode. The Grid forces shapes and text to be placed only at character block locations. (See *GLOSSARY*).

If Cross is set, the crosshair dots fall only on the grid points.

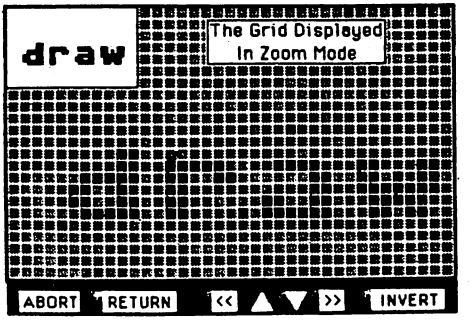
1) Set Grid.
2) To turn Grid off, set Pixel.



The Grid may be displayed visually by pressing f1 in both regular and Zoom modes.



HINT: Use the visual grid to check the placement of FLEXIDRAW drawings that will have color added in the PEN PALETTE program. (See the *INTRODUCTION TO PEN PALETTE* section in this manual).

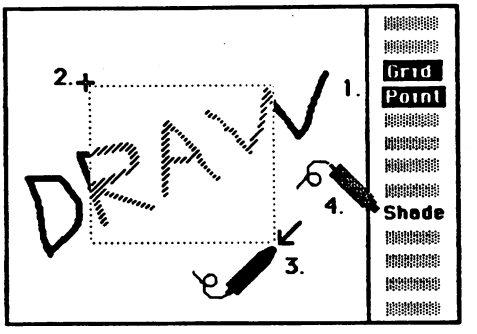


...USING FLEXIDRAW

• SHADE...PATTERNS

Use the Shade function to overlay patterns over dark areas. Overlay multiple patterns for different artistic effects.

1) Set Grid Point.
2) Set Start Point + indicating one corner of area to be shaded.
3) Move ↙ to opposite corner of area to be shaded.
4) Select Shade. The Fill Pattern Menu will be displayed.
5) Select a pattern.

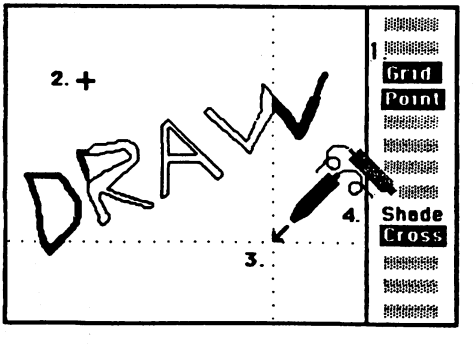


• SHADE...EDGES

Shade...Edges may be used to simplify or enhance a drawing by eliminating all but the edges. It may also be used to outline edges for additional artistic effects.

1 - 4) Follow directions for Shade... Patterns above.
5) Select Edges to simplify a drawing,

OR select Invrt Edges to outline the edges of a drawing.



HINT: Use Cross with Invrt Edges to make multiple lines around figures. The Graphics Cursor will return to location 2, while the Crosshairs remain at location 3 for precise repetition.

- **TO UNDO A SHADE OR SHADE/EDGES**

You may UNDO a Shade or a Shade/Edges operation and return to the Pattern Menu by pressing RUN STOP immediately after the Shade or Shade/Edges is complete and *before* performing any other function.

- **ABORTING A SHADE OR SHADE/EDGES**

Press RUN STOP while the Pattern Menu is displayed. The Start Point will remain set.

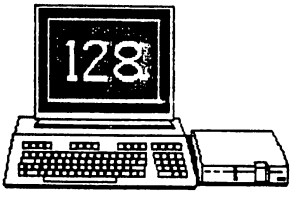
Press RUN STOP again to abort the Start Point.

- **TO ERASE USING SHADE**

Follow steps 1-4 in *SHADE...PATTERNS* to define the area to be erased.

5) Press Space Bar. The Area defined within the imaginary box will be erased.

PLEASE NOTE: This function CAN NOT be OOPSied.



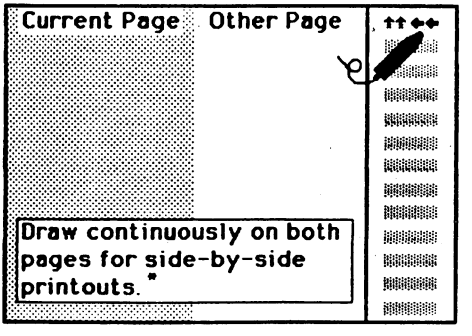
...USING FLEXIDRAW

- **SPLIT SCREEN...RIGHT/LEFT**

This function links and displays the right side of the current Page with the left side of the other Page, allowing drawing on both as one wide picture.

1) Press f7.

2) Press Crsr ←→ or select ←←.



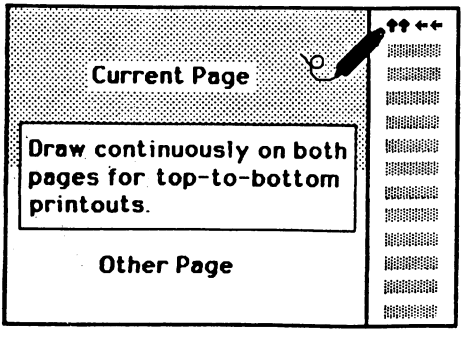
* Some printers only. See the *PRINTING YOUR PICTURES* section in this manual.

- **SPLIT SCREEN...UP/DOWN**

This function links and displays the bottom half of the current Page with the top half of the other Page, allowing drawing on both as one tall picture.

1) Press f7.

2) Press Crsr ↑↓ or select ↑↑.



- **TO UNSPLIT SCREEN**

Press f7 or select Split which displays the next Page.

• MANIPULATING IMAGES

One of the most powerful features of FLEXIDRAW is the ability to manipulate images by using the Copy and Paste functions.

The Copy function copies an image to a hidden Scratch Pad where it is stored until another Copy function is performed.

An image stored on the Scratch Pad may be replicated anywhere on Page1 or Page2 or between Pages by using the Split Screen function.

An image stored on the Scratch Pad may be Flipped and/or Rotated by using the Function Keys.

An image stored on the Scratch Pad may be replaced or positioned on the Work Area by using the data input device while in the Grid mode, or by using the Cursor Control Keys while in the Pixel mode.

An image stored on the Scratch Pad will be erased by performing a Fill.

• FUNCTION KEYS

f1 Displays the positioning **Grid** in white and grey on the regular Work Area and in the **Zoom** mode.

SHIFT + f1 Toggles the Work Area display colors between grey/white and black/white for improved contrast when displaying pictures after drawing.

f3 Flips the Scratch Pad image ⟷.

SHIFT + f3 Flips the Scratch Pad image ↕.

f5 Rotates the Scratch Pad image 90° to the right.

SHIFT + f5 Rotates the Scratch Pad 90° to the left.

f7 **Split**s or unsplits the Work Area.

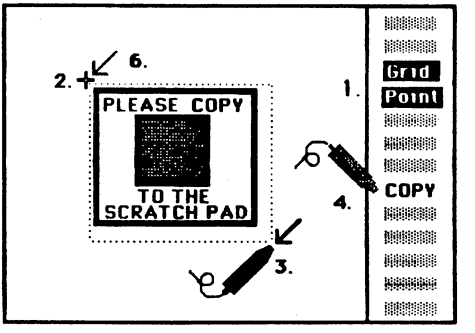
SHIFT + f7 Enters the FLEXIDRAW Filer.

...USING FLEXIDRAW

• COPY AN IMAGE TO THE SCRATCH PAD

1) Set Grid Point.
2) Set a Start Point + at the upper left corner of the image to be copied.
3) Move ↙ to lower right corner of the image. Position ↙ to leave a small area to the right and just below the image.
4) Select Copy.
5) The image is now stored on the Scratch Pad. The ↙ will return to the upper left corner of the image.

PLEASE NOTE: Performing a Fill erases the Scratch Pad.

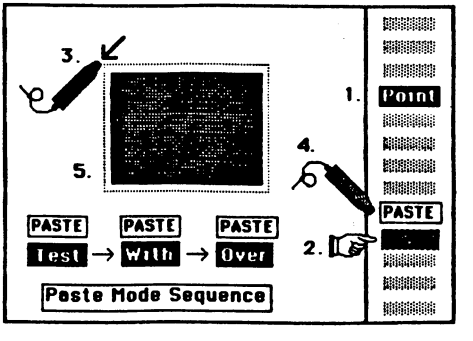


The Scratch Pad

• PASTE PROCEDURE

1) Set Point.
2) Check Paste mode.
3) Move ↙ to the upper left corner of location for Paste on either Page.
4) Select Paste.
5) Scratch Pad image will be drawn according to Paste mode.

HINT: Paste may be made in either the Grid or Pixel mode by using either a data input device or Cursor Control Keys to position the ↙ for placement.

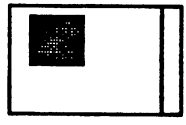


• USING THE PASTE FUNCTION

Images copied to the Scratch Pad can be copied back to the Work Area in three ways using the Paste command.

BEFORE PASTE

Scratch Pad



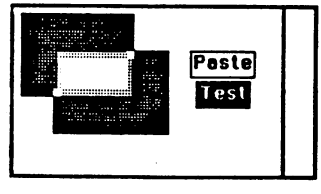
Work Area

RESULTS OF PASTE

Using the same Scratch Pad image, the following examples show the various Paste modes.

PASTE/TEST

Use Paste / Test to test the placement of an image before making it permanent. The image may be unPasted by selecting Paste / Test again.

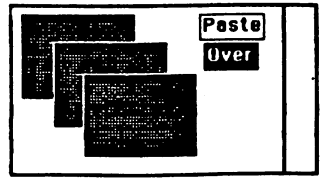


PASTE/WITH

Use Paste / With to create a permanent transparency. Images can be viewed when placed on top of each other.

PASTE/OVER

Use Paste / Over to create a permanent overlay. Only the topmost image is completely visible.



• ABORTING A PERMANENT PASTE

Press RUN STOP before performing another function.

...USING FLEXIDRAW

• FLIP THE SCRATCH PAD IMAGE

1) Set Grid Point.

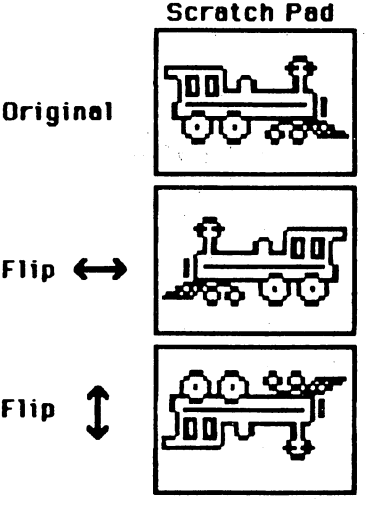
2) Copy desired image to the Scratch Pad.

3) To Flip ↔ press f3.

   To Flip ↕ press SHIFT + f3.

4) Paste flipped image onto the Work Area.

HINT: Use Paste Test to preview positioning.



• ROTATE THE SCRATCH PAD IMAGE

1) Set Grid Point.

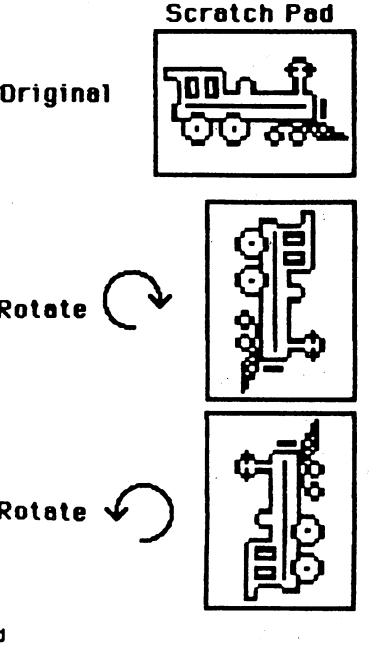
2) Copy desired image to the Scratch Pad.

3) To Rotate 90° to the right ↷ press f5.

   To Rotate 90° to the left ↶ press SHIFT + f5.

4) Paste flipped image onto the Work Area.

HINT: Use Paste Test to preview positioning.



PLEASE NOTE: Rotated images will be slightly distorted because the Commodore 64, 64C, SX64 and 128 pixel shape is not square.

• SAVING A FLEXIDRAW PICTURE

1) Display the Work Area which is currently showing the picture you wish to save.

2) Access the FLEXIDRAW Filer.

3) Remove the Working Copy PROGRAM Disk from the drive.

4) Insert a formatted disk into the disk drive. If the disk is not formatted, then see the section *FORMATTING A NEW DISK* **before** attempting to save a picture.

PLEASE NOTE: Formatting the disk will not erase the picture to be saved. It will erase any information that may already be on the disk you wish to format.

5) Choose:

1) Save a Picture file

The screen will display:

File Name to Save:

6) Type a name for the picture (maximum 16 letters) and press <RETURN>. If resaving an edited picture, you must use a different picture name.

The screen will display:

Saving [picture name]

When saving is complete, disk status will be displayed.

If the status is anything but **00,OK,00,00**, see the section *DISK ERRORS*.

7) Press <RETURN> to return to the Filer or <7> to return to FLEXIDRAW.

PLEASE REMEMBER: The picture displayed on the *current* Work Area will be saved on the disk.

SAVE @ Ø: Pg. 54

...FLEXIDRAW FILER

- **LOADING A FLEXIDRAW PICTURE** FROM DISC

1) Display the Work Area on which you wish to load your picture. If you currently have an image on that screen, it will be replaced by the new picture. If you wish to save your current work first, follow the instructions in the section *SAVING A FLEXIDRAW PICTURE*, then continue.

2) Access the FLEXIDRAW Filer. P.45

3) Remove the Working Copy PROGRAM Disk from the drive.

4) Insert into the disk drive either the Working Copy PICTURE Disk or any disk containing a FLEXIDRAW format picture.

5) If the name of the picture file is already known, choose:

   2) Load a Picture file

   (If the name is not known, follow the instructions in the section *LISTING THE DIRECTORY*). P.48

   The screen will display:

   File name to load:

6) Type the name of the picture to be loaded and press <RETURN>.

   The screen will display:

   Loading [file name]

   When loading is complete, disk status will be displayed.

   If the status is anything but **00,OK,00,00**, see the section *DISK ERRORS*.

7) Press <RETURN> to return to FLEXIDRAW.

PLEASE REMEMBER: The picture will be loaded into the *current* Work Area, erasing anything that may already be there.

- **KEYBOARD FUNCTIONS**

← 1 2 3 4 5 6 7 8 9 0 + - £ CLR HOME INST DEL f1
CTRL Q W E R T Y U I O P @ * ↑ RESTORE f3
RUN STOP SHIFT LOCK A S D F G H J K L : ; = RETURN f5
SHIFT Z X C V B N M , . / SHIFT CRSR CRSR f7
SPACE BAR

When typing on the Work Area, use the following keys for positioning the Text Cursor:

HOME Moves [ ] to upper left corner of the Work Area.

INST DEL Deletes character to the left of [ ]. Moves [ ] left one character space.

RETURN Moves [ ] down one line and over to the left side of the Work Area.

Crsr ← → Moves [ ] one character space to the right.

SHIFT + Crsr ← → Moves [ ] one character space to the left.

Crsr ↑ ↓ Moves [ ] one line down.

SHIFT + Crsr ↑ ↓ Moves [ ] one line up.

...USING FLEXIDRAW

• ALPHANUMERICS

Use the Keyboard to type letters and symbols on the Work Area. Characters may then be repositioned using Copy and Paste procedures with a data input device or the Cursor Control Keys.

Letters and symbols are treated like other forms of graphics; you may Copy, Paste, Rotate, Flip and Undo them.

FLEXIDRAW's Font Styles are listed below. For additional font styles see the *OTHER INKWELL SYSTEMS PROGRAMS AND HARDWARE* section for information regarding INKWELL SYSTEM'S FLEXIFONT Program. FLEXIFONT contains additional font styles and allows you to capture Public Domain fonts for use with FLEXIDRAW.

• FONT STYLES

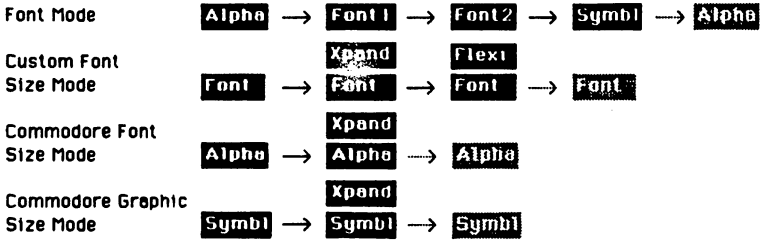
Normal Font	Expanded Font	Characters Available
Commodore	Commodore	Upper and lower case letters, numerals and graphic symbols
Type	Type	Upper and lower case letters, numerals and graphic symbols
Roman	Roman	Upper and lower case letters, numerals
Gothic	Gothic	Upper and lower case letters, numerals
Script	*Script*	Upper and lower case letters, numerals
COMPUTER	COMPUTER	Upper and lower case letters, numerals and graphic symbols
ART DECO	ART DECO	Upper case letters, numerals and graphic symbols
FANTASY	FANTASY	Upper case letters, numerals and graphic symbols
math Vovu8	math Vovu8	Lower case letters, numerals and mathematical symbols

• FLEXI FONTS

↑OLD ENGLISH	Upper case letters and numerals
/old english	Lower case letters and numerals
↑TIMES	Upper case letters and numerals
/times	Lower case letters and numerals

• FONT MODE SEQUENCE

The Alpha and Symbol Commodore Font Set can be used in both the standard one character size and the expanded four character size. Custom fonts can be used both as standard and expanded. FLEXI-fonts are special four character size fonts and can only be used in the FLEXI mode.


Font Mode
Alpha → Font1 → Font2 → Symbl → Alpha
Custom Font Size Mode
Font → Xpand Font → Flexi Font → Font
Commodore Font Size Mode
Alpha → Xpand Alpha → Alpha
Commodore Graphic Size Mode
Symbl → Xpand Symbl → Symbl

• EXPANDING FONTS

1) Hold SHIFT while selecting Alpha , Symbl or Font to change text size.
2) Type as described in *ADDING TEXT TO DRAWINGS*.

• USING THE COMMODORE FONT AND SYMBOL SET

In Alpha mode: The Keyboard types lower case text.

Use the SHIFT to type upper case text.

Use the CK to type left side graphics symbols.

In Symbl mode: The Keyboard types upper case text.

Use the SHIFT to type right side graphics symbols.

Use the CK to type left side graphics symbols.

Follow instructions for *ADDING TEXT TO DRAWINGS* or *USING ALPHANUMERICS FOR PATTERN FILLS*.

...USING FLEXIDRAW

• USING CUSTOM FONTS

1) Choose a font style from the *FONT STYLE* list.
2) Follow instructions in the section *LOADING A CUSTOM FONT FILE* to load the font in either **Font1** or **Font2**. The first five letters of the font name will replace the word FONT on the menu.
3) Follow instructions for *ADDING TEXT TO DRAWINGS* or *USING ALPHANUMERICS FOR PATTERN FILLS*.

PLEASE NOTE: When **Flexi** Fonts are chosen, you must use the **SHIFT** and toggle the font to the **Flexi** size to avoid getting garbage on the screen when you type.

HINT: When two **Flexi** Fonts are chosen and one is selected as the current font, pressing **SHIFT** while typing selects the second **Flexi** Font. This is ideal for standard keyboard action when using upper and lower case **Flexi** Fonts.

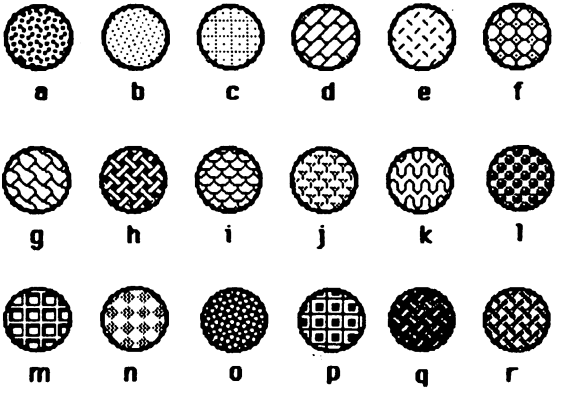
• USING THE PATTERN FONT

The Pattern Font has been included to provide 14 additional Pattern Fills accessed off of the Keyboard. To access:

1) Follow the instructions for loading a Custom Font.
2) Choose *PATTERN* as the Custom Font.
3) When the Work Screen reappears, toggle the Font mode until **Patte** is displayed.
4) Follow the instructions for *FILLING WITH PATTERNS* and *USING ALPHANUMERICS FOR PATTERN FILLS*.

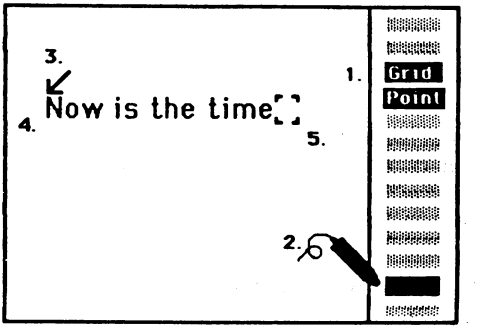
The letters A through R in lower case will provide the following pattern choices:

HINT: Inverting the patterns will provide additional artistic effects.



• ADDING TEXT TO DRAWINGS

1) Set **Grid** **Point**.
2) Set **Alpha** or **Symbl** or **Font1** or **Font2**. (See *FONT MODE SEQUENCE*).
3) Move ↙ to desired location of the first character.
4) Type.
5) ⌜ ⌟ shows where the next character will be typed.



• FOR LARGER DOCUMENTS

1) Type on current Page.
2) Use the **Split** function to move the Page.
3) Reposition ↙ and continue typing.

See the section *PRINTING YOUR PICTURES* for instructions to print the Pages Side-By-Side.

• TO ERASE TEXT

Press INST DEL.

• TO UNDO TEXT

Press RUN STOP.

• USING ALPHANUMERICS FOR PATTERN FILLS

1) Select Font style to be used for Pattern Fill and toggle the Font Mode until it appears on the Menu.
2) Follow instructions for *FILLING WITH PATTERNS*. Instead of choosing a pattern from the Pattern Menu, press any KEY or SHIFT + KEY or the C= + KEY on the Keyboard. The pattern will correspond to the key pressed.

PRINTING YOUR PICTURES

• EQUIVALENT PRINTERS CHART

Use the following information to assist you in selecting the proper printer driver for FLEXIDRAW.

IF YOU HAVE:	THEN CHOOSE:
Commodore 1000	
Okidata OkiMate 10, 20 (For Black and White only)	
Ergo Hush 80	
Siekosha GP 550	1525
Smith-Corona D100, D200	
Legend 880	
Radix 10, 15	
Mannesman-Tally Spirit 80	
Panasonic KX-P 1090, 1091	
BMC	
Riteman.....	Gemini 10

For color printing on the Okidata Okimate 10 or 20, use the printer drivers supplied by Okidata included on the disk with the printer.

If your printer is not listed, please try each printer driver on the menu to find your printer's equivalent.

• SETTING UP YOUR PRINTER

Please set your printer switches as follows:

Gemini 10/10X/15/15X: 1) Off 2) On 3) Off 4) On

C.Itoh Prowriter:

1.1 Open	2.1 Closed
1.2 Closed	2.2 Open
1.3 Open	2.3 Open
1.4 Open	2.4 Open
1.5 Closed	2.5 Open
1.6 Closed	2.6 Open
1.7 Open	2.7 Open
1.8 Closed	2.8 Open

The following printers require no special switch settings:

Commodore 1525, MPS-801,1526, MPS-802,1000
Okidata OkiMate 10
Diablo C150 Inkjet
Quadram QJ-9000 QuadJet
Canon PJ-1080A Inkjet

For printers not listed above, refer to the owner's manual; set switches for:

1) No Auto Linefeed
2) 8-Bit Interface
3) Transparent Mode

• SETTING UP YOUR INTERFACE

Please set your parallel interface switches as follows:

EASY PRINT:

Switches 1 - 3 refer to your Printer Selection
(See Easy Print User's Manual)
4) On 5) On 6) Off

Cardco's *A,B, G,+G*:

8-Bit Interface
No Auto Linefeed
2) Off 6) Off 8) Off
(All other Switches are ON)

Cardco's *G-WIZ*:

8-Bit Interface
No Auto Linefeed
1) On
(All other Switches are OFF)

Tymac's *THE CONNECTION*:

1) Closed 2) Open

PLEASE NOTE: It has been reported that older versions of Tymac's *THE CONNECTION* may not function properly with FLEXIDRAW. If you have problems with printouts, please contact Tymac to update your interface.

...PRINTING YOUR PICTURES

Orange Micro's *GRAPPLER CD*:

1) Off	5) Off
2) Off	6) On
3) On	7) On
4) On	8) Off

If your Interface is not currently listed, consult your Owner's Manuel and set for "Transparent Mode". If your printer does not respond, contact INKWELL SYSTEMS for information.

• TO PRINT YOUR PICTURE WHILE USING FLEXIDRAW

Select **PRINT**.

1X 4X will be displayed.

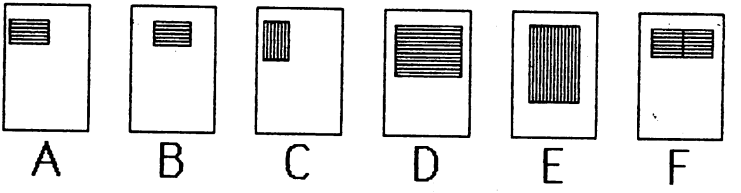
To specify **PRINT** size, either:

- Select **1X** or **4X** off the Menu for single pictures.
- Press and hold <SHIFT> while selecting **1X** off the Menu for side-by-side pictures. Refer to the Printout Orientation Diagram for a list of the printers with this option.

IMPORTANT: If your printer does not respond to the PRINT command, please check to see that you have SET PREFERENCES on a non-write-protected Working Copy of the PROGRAM Disk before beginning to use FLEXIDRAW.

PREFERENCES CANNOT BE SET ON THE FLEXIDRAW MASTER DISK!

The size and orientation of the printout depends on the printer. Please refer to the **PRINTOUT ORIENTATION DIAGRAM** below:



A: 1/4 page, left side of paper.
B: 1/4 page, center of paper.
C: 1/4 page, left side of paper, rotated 90° clockwise.
D: Full page, center of paper.
E: Full page, center of paper, rotated 90° clockwise.
F: 1/4 page, center of paper, both PAGEs side-by-side.

PRINTER OR EQUIVALENT	PRINTOUT STYLE 1X	<SHIFT>+1X	4X
Commodore 1525/MPS-801,1000	B	C	E
Commodore 1526/MPS-802	A	F	D
Gemini 10/15	A	N/A	E
Gemini 10X/15X	A	F	D
Epson MX70/80	A	N/A	E
Epson FX80/RX80	A	F	D
C. Itoh Prowriter	A	F	D
Okidata Microline 84	A	N/A	E
Okidata Microline 92/93	A	F	D
Diablo C150 Inkjet	A	N/A	D
Quadram QJ-9000 Quadjet	A	F	D
Canon PJ-1080A Inkjet	A	F	D

- **SIDE-BY-SIDE PRINTOUTS**

Side-by-side printout prints the *current* page on the *left* side of the paper and the *other* page on the *right*.

1) Use the right-left **SPLIT** feature to check that lines are connected as desired across the two pages.

...PRINTING YOUR PICTURES

2) Check that the picture to be printed on the *left* side of the paper is displayed on the screen.

3) Select **PRINT**.

4) Press ond hold <SHIFT>, while selecting **1X**.

PLEASE NOTE: This option is not available with all printers; please check table on the preceding pages for specific printer requirements.

• VARYING YOUR PICTURE POSITIONS

By choosing the **COPY, PASTE** and **SPLIT SCREEN** functions in FLEXIDRAW, 1/4 page pictures may be positioned to print out on the *right* by leaving the "Current Page" area blank and the picture to be printed on the "Other Page" position. They may be *centered* by using **COPY** and **PASTE** and positioning the picture *between* the Split Screens. Larger, more detailed drawings may be created by "ganging" up to six 1/4 page screens, printed two at a time, on an 8 1/2" by 11" sheet of paper.

• ABORTING A PRINTOUT IN PROGRESS

Pressing <RUN/STOP> while printout is in progress will abort the **PRINT** and return you to FLEXIDRAW.

PLEASE NOTE: You must reset the printer and interface by turning them off, then back on again, before attempting another printout.

PRINTING WITH A PLOTTER

FLEXIDRAW supports both the Sweet-P Plotter by Enter Computer and the Commodore 1520 Plotter. To use the plotter to print your picture, you must first save your picture on your PICTURE Disk, then follow the instructions below for rebooting your Working Copy PROGRAM Disk for the correct program.

• THE SWEET-P PLOTTER DUMP

The Sweet-P Plotter manufactured by Enter Computer may be used to print pictures on both paper and mylar (for overhead transparencies). This program will give you one screen in Format E (see the Printout Orientation Diagram).

TO RUN:

1) Insert the Working Copy PROGRAM Disk into the drive and type:

LOAD "SWEETP",8 <RETURN>

2) The screen will prompt with **READY**. Type:

RUN <RETURN>

3) Follow the instructions on the screen.

• THE COMMODORE 1520 PLOTTER DUMP

The 1520 Plotter manufactured by Commodore may be used to print pictures on special paper similar to adding machine paper. This program will give you one screen in Format B (see the Printout Orientation Diagram).

TO RUN:

1) Insert the Working Copy PROGRAM Disk into the drive and type:

LOAD "1520 PLOTTER",8 <RETURN>

2) The screen will prompt with **READY**. Type:

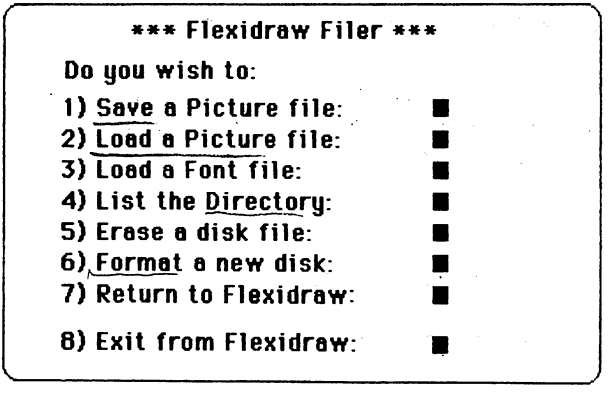
RUN <RETURN>

3) Follow the instructions on the screen.

FLEXIDRAW FILER

The Filer allows disk access from FLEXIDRAW. It is also used to exit FLEXIDRAW and return to the System Menu.

The Filer is accessed by pressing <SHIFT> and <f7> simultaneously.


*** Flexidraw Filer ***
Do you wish to:
1) Save a Picture file:
2) Load a Picture file:
3) Load a Font file:
4) List the Directory:
5) Erase a disk file:
6) Format a new disk:
7) Return to Flexidraw:
8) Exit from Flexidraw:

To choose a function, press its corresponding number on the keyboard or, if you have The Light Pen, select the box to the right of your choice with the pen.

To abort a Filer command, press <RETURN> before typing.

• LOADING A CUSTOM FONT FILE

1) Access the FLEXIDRAW Filer.

2) Make sure that the Working Copy PROGRAM Disk is in the drive. (See the section *OTHER SOFTWARE AND HARDWARE AVAILABLE FROM INKWELL SYSTEMS* for loading fonts created with the INKWELL SYSTEMS program, FLEXIFONT).

3) If the name of the Font file is already known, then choose:

   3) Load a Font file

   (If the name is not known, follow instructions in the section *LISTING THE DIRECTORY*). P.48

   The screen will display:

   Font file name to Load:

4) Type the name of the Font to be loaded and press <RETURN>.

   The screen will display:

   FONT ONE OR TWO: 1

5) Choose the font area into which the font will be loaded and press either <1> or <2> on the keyboard followed by <RETURN>.

PLEASE NOTE: Two custom font styles can reside simultaneously in FLEXIDRAW along with the standard Alpha and Symbol Commodore font styles which correspond to the Commodore keyboard.

The screen will display:

Loading [Font name]

When font loading is complete, disk status will be displayed.

If the status is anything but **00, OK, 00, 00**, see the section *DISK ERRORS*.

• ...LOADING A CUSTOM FONT FILE

After returning to FLEXIDRAW, the first five letters of the font name that was loaded will replace the corresponding **FONT** on the Menu.

6) Press <RETURN> to return to the Filer or <7> to return to FLEXIDRAW.

PLEASE NOTE: When loading two FLEXI-fonts (upper and lower case), it is best to load the upper case font in **FONT 1** and the lower case font in **FONT 2.**

When **FONT2** (lower cose) is displayed on the Work Screen Menu, standard typing practices may then be followed (i.e. pressing <SHIFT> for upper cose letters) eliminating the necessity of making menu selections to shift between **FONT 1** and **FONT 2.**

• LISTING THE DIRECTORY

1) Access the FLEXIDRAW Filer.

2) Remove the Working Copy PROGRAM Disk from the drive.

3) Insert the disk whose directory you wish to view into the disk drive, then choose:

   4) List the Directory

   The Disk Directory will be listed on the screen.

4) Press and hold <CTRL> to slow down the listing speed, <SHIFT> to pause, <RUN/STOP> to abort the listing command.

   When the directory listing is complete, disk status will be displayed.

   If the status is anything but **00,OK,00,00,** see the section *DISK ERRORS*.

5) Press <RETURN> to return to the Filer or <7> to return to FLEXIDRAW.

PLEASE NOTE: The FLEXIDRAW Filer is a handy way to view directory listings for any of your disks.

• ERASING A DISK FILE

1) Access the FLEXIDRAW Filer.

2) Remove the Working Copy PROGRAM Disk from the drive.

3) Insert into the disk drive a disk which contains the file you wish to erase.

4) If the name of the file is already known, then choose:

   5) Erase a Disk file

   (If the name is not known, follow instructions in the section *LISTING THE DISK DIRECTORY*).

   The screen will display:

   File name to erase:

5) Type the name of the file to be erased and press <RETURN>.

   The screen will display:

   Are you sure [Y/N]:

6) Press <Y> then <RETURN> to erase the file, <N> then <RETURN> to abort the Erase operation.

   When the Erase is complete, the disk status will be displayed.

   If the status is anything but **XX, FILES SCRATCHED, XX, XX** (items marked **XX** may be anything in this case) see the section *DISK ERRORS*.

7) Press <RETURN> to return to the Filer or <7> to return to FLEXIDRAW.

PLEASE REMEMBER: DISK ERASE CAN *NOT* BE UNDONE ONCE IT IS COMPLETE. ALWAYS BE SURE YOU HAVE THE CORRECT FILE BEFORE YOU CHOOSE <Y>.

...FLEXIDRAW FILER

- **FORMATTING A DISK**

1) Access the FLEXIDRAW Filer.

2) Remove the Working Copy PROGRAM Disk from the drive.

3) Insert into the disk drive a disk to format. This disk may be either new or previously used. **Formatting the disk erases all information previously stored on it.**

4) Choose:

   6) Format a New Disk

   The screen will display:

   New disk name, ID:

5) Type the name for the new disk (maximum of 16 letters), a comma, and then a two letter identification for the disk.

   Press <RETURN>.

   Example: **NEWDISK,ND** <RETURN>

   The screen will display:

   Are you sure [Y/N]:

6) Press <Y> then <RETURN> to format the disk, <N> then <RETURN> to abort the Format operation.

   The Format operation takes about 90 seconds to complete.

   When formatting is complete, the disk status will be displayed.

   If the status is anything but **00,OK,00,00**, see the section *DISK ERRORS*.

7) Press <RETURN> to return to the Filer or <7> to return to FLEXIDRAW.

PLEASE REMEMBER: Disks formatted with the FLEXIDRAW Filer can be used just as any formatted disk. The Format is not "special" for FLEXIDRAW only.

• RETURNING TO FLEXIDRAW

To return to FLEXIDRAW and continue drawing after using the Filer, choose:

7) Return to Flexidraw

• EXITING FROM FLEXIDRAW

To exit from FLEXIDRAW and return to the System Menu please do the following:

1) Access the FLEXIDRAW Filer.

2) Choose:

8) Exit from Flexidraw

The screen will display:

Please verify QUIT command:

***** ARE YOU SURE? (y/n):**

2) Press <Y> then <RETURN> to exit from FLEXIDRAW or press <N> then <RETURN> to abort the Exit command.

After verifying the Quit command, the screen will display:

Insert the FLEXIDRAW Master Disk
and press <RETURN>:

3) Insert your Working Copy PROGRAM disk into the drive and press <RETURN>. The program will return to the System Menu.

FLEXIDRAW PICTURE LIBRARY

The FLEXIDRAW Picture Library on Side 2 of the FLEXIDRAW MASTER Disk contains many sample pictures which can be displayed and/or printed in both black and white and/or color. Use them for practice or as examples of different ways to use FLEXIDRAW and PEN PALETTE.

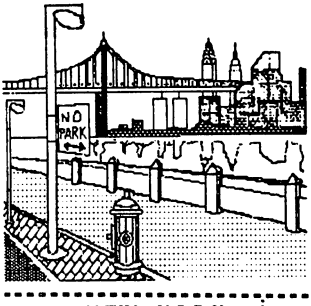
Many of these pictures have been sent to INKWELL SYSTEMS by FLEXIDRAW owners including: Wayne Schmidt, Michael Horgan, Peter and Paul Hughes, John Dodge, Don White, and Adrian Sebborn.

Color Pictures:

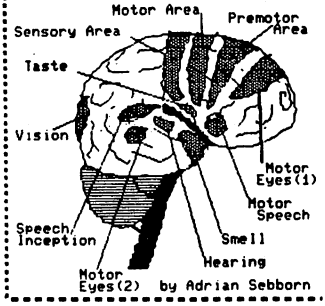
IRISH SPRING
JAGUAR
SATELLITE

Black and White:

CLIP ART (located on Side One)
BRAIN
NEW YORK
NIKE
PIRATE



NEW YORK

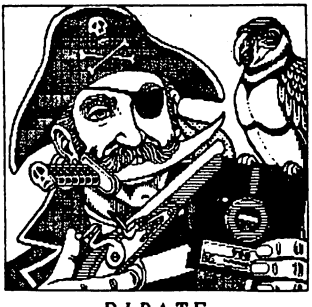


BRAIN

ODYSSEY

PETER HUGHES

NIKE



PIRATE

JAGUAR

FLEXIDRAW SYMBOL LIBRARIES

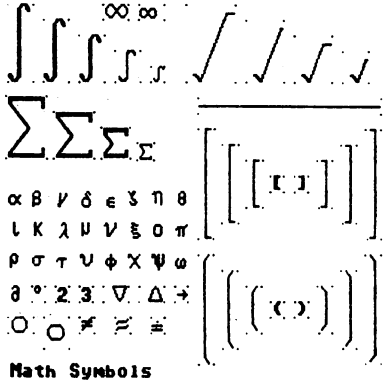
A major feature of FLEXIDRAW is the ability to use and define custom symbol libraries which consist of one picture which is made up of many smaller pictures that you can easily **COPY** and **PASTE** into drawings.

A Library File may be loaded into either **PAGE 1** or **PAGE 2**. Follow instructions to **COPY** and **PASTE** the symbols from one page to the other.

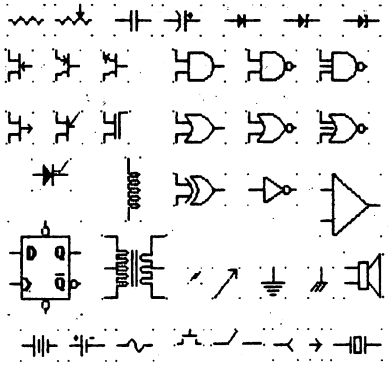
• LOADING A SYMBOL LIBRARY FILE

Load a Library File like any other picture as described in the Filer.

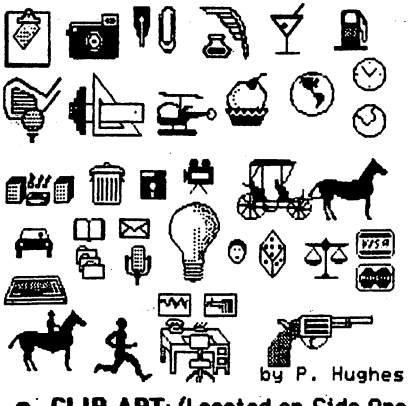
THE FLEXIDRAW PICTURE DISK INCLUDES THE FOLLOWING LIBRARIES:



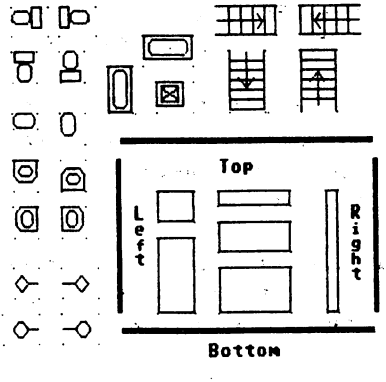
• **MATH.LIB** : Scientific, mathematical symbols, and Greek letters.



• **SCHEMATIC.LIB** : Analog and digital electronic schematic symbols.



• **CLIP ART**: (Located on Side One) Useful small pictures and symbols drawn for us by Peter and Paul Hughes of Canton, MA.



• **ARCHITECT.LIB** : Architecture design symbols.

TRICKS AND SHORTCUTS

- For those using a 170-C Light Pen, holding down the <CTRL> Key is the same as pressing the pen tip against the screen. This is good for airbrushing in **PIXEL, DRAW/SPRAY** or for loose sketching in **PIXEL, DRAW/SKETCH.**

- Hold down the <Commodore> Key while "rubber bonding" lines (use **RUBBR**) to create a "fan" of lines. Turn on the **FILTR** or **GRID** for a coarser fan. Use **PIXEL** and the <Cursor Control> Keys for interesting effects.

- To display a grid of dots on the screen, Set **GRID, DRAW/SPRAY** and draw on the screen.

- To erase a solid block area of the screen, position the cursor over the area to be erased and choose **FILL.**

- To erase a rectangular area on the screen, **COPY** the area and, without moving the cursor, **PASTE/TEST** the area over itself. The area may be restored by repeating **PASTE/TEST.**

- It is sometimes useful to **COPY** the symbols that are most often used in a picture and place them on the Work Area to **PASTE** into place quickly.

- To draw connected lines quickly use the <Back Arrow> Key or its equivalent (depending upon your data input device) rather than selecting **LINE** on the menu when in **POINT** or **RUBBR.**

- To replace a disk file without having to scratch it first, add **@0:** to the beginning of the file name when saving it.

WARNING: Only use this on a disk that has at least 35 blocks free. Example:
FILE NAME TO SAVE: @0:MYPICTURE

- To restore the Work Area currently being displayed on the screen after performing a light pen recalibration with <RUN/STOP> and <RESTORE>, set **GRID, POINT**, move the cursor to the upper left corner of the screen, and select **PASTE.**

- To type reverse (white on black) characters while in **ALPHA, SYMBL** or some fonts press <Commodore>+<RVS ON>. To return to normal, press <Commodore>+<RVS OFF>.

- Use the Display Grid function <f1> to help line up text and check character block alignment for PEN PALETTE while in FLEXIDRAW.

• Use **SHADE** then <SPACE> as the shade pattern to quickly erase rectangular blocks of the work area.

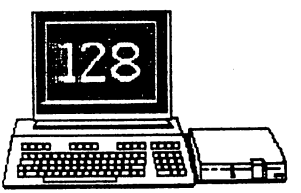
PLEASE NOTE: This operation cannot be reversed by using Oops!

USING FLEXIDRAW WITH OTHER SOFTWARE / HARDWARE SYSTEMS

Files created with graphics programs other then FLEXIDRAW may be compatible with it if the files are simple, full resolution 8K bitmaps, with no color or compression. The following systems are known to be directly compatible:

- *COMPUTEREYES*, Digital Acquisition System, by Digital Vision.
- *THE PRINT SHOP* (using the Screen Magic mode).
- *MOVIE MAKER*
- *FLEXI-AIDED-DESIGN*, by Keri Corp
- *PERSPECTIVES II*, by Keri Corp
- *BANNERMAKER*, by Cardinal Software
- *BILLBOARD MAKER*, by Solutions Unlimited
- *ICON FACTORY*, by Solutions Unlimited
- Mort's *PUBLIC DOMAIN PICTURE DISK #1*
- *FLEXIDRAW SYMBOL LIBRARIES*, by the U.S. Commodore User's Group
- *CLIP ART PLUS*, by RJ Softshop
- *TRANSFORMERS*
- Public Domain fonts should be able to be loaded directly into FLEXIDRAW, or use INKWELL SYSTEMS' FLEXIFONT Program to capture and save them first.

INKWELL SYSTEMS is not responsible for contents or useability of any of the programs listed above.



INTRODUCTION TO PEN PALETTE

The PEN PALETTE color addition Program is used to add color to pictures created by FLEXIDRAW or FLEXIDRAW compatible products. **It is not a color drawing program**, but like FLEXIDRAW, is completely menu-driven and may be used with your choice of data input devices.

• BASIC CONCEPTS

- Two colors can be turned on within each character block on the screen. A character block is 8 pixels by 8 pixels in size.
- Pictures loaded into PEN PALETTE for the first time will appear on the screen in light and dark grey scale. The entire new picture corresponds to Paint Pot A.
- <SHIFT> + <CLR/HOME> removes all color added to the picture and returns the colors back to the beginning grey scale corresponding to Paint Pot A.
- The **EDIT** feature is used to **ZOOM** in on an area of the Work Screen for better color definition by doing single pixel editing of the picture. The edited picture may then be saved.

• USING DIFFERENT DATA INPUT DEVICES

Please refer to *USING DIFFERENT DATA INPUT DEVICES IN FLEXIDRAW* found in the *INTRODUCTION TO THE FLEXIDRAW DRAWING PROGRAM* section of this manual for instructions in using the different data input devices in the **DRAW** mode.

IMPORTANT: IN PEN PALETTE, THE DATA INPUT DEVICE CANNOT BE CHANGED WHILE USING THE PROGRAM.

• PEN PALETTE TUTORIAL

The easiest way to learn to use PEN PALETTE is to read *USING PEN PALETTE* first, then load PEN PALETTE and use the PEN PALETTE TUTORIAL pictures located on the PICTURE Disk. The TUTORIAL Pictures are listed as **TUTOR1.PIC** through **TUTOR5.PIC** and will guide you through the basic concepts and operation of this program. Use the PEN PALETTE Filer to load the pictures and follow the instructions on the tutorial screens.

After completing the TUTORIAL, load any of the pictures available on the PICTURE Disk and practice using PEN PALETTE. **For more technical information on adding color to the 64's high resolution graphics, please refer to the Commodore 64 Programmer's Reference Guide.**

LOADING PEN PALETTE

Follow the instructions in the *SET PREFERENCES* and *LOADING THE SYSTEM MENU* sections of this manual to load your printer information and bring up the System Menu. Select **ADD COLOR** with the highlighter bar.

The next screen to appear will ask you for your data input device:

Select Input Device:

Mouse
Joystick
Touch Pad
Light Pen

IMPORTANT: In this program your choice of data input device cannot be changed while using the program. If you wish to change data input devices, you should save your picture, exit PEN PALETTE, then reload it from the System Menu by following the above instructions and choosing a different data input device.

- If you have chosen a light pen data input device, a calibration screen will appear, similar to the one in FLEXIDRAW. This calibration screen is used to adjust the pen to the system. Press the tip of the 170-C pen to the line on the screen, or hold the Rear Touch Pad of the 184-C and place the pen tip close to the screen, positioning it there until three tones are heard before lifting the pen away from or off of the screen. **THE PEN PALETTE FILER** will appear will appropriate choices highlighted in white type.

- If you have loaded another data input device driver, the **THE PEN PALETTE FILER** will appear with appropriate choices highlighted in white type.

Remove the Working Copy PROGRAM Disk and insert a disk containing a picture to be colored and choose:

1) LOAD PICTURE FILE

The screen will display:

File?

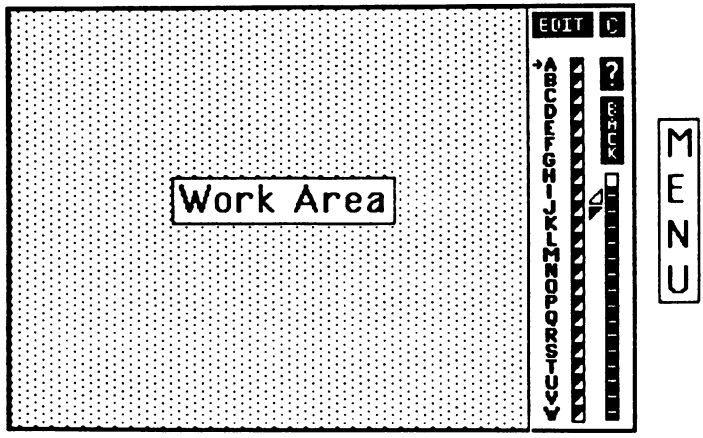
Type:

(PICTURE NAME) <RETURN>

The PEN PALETTE Work Area will appear.

USING PEN PALETTE

- **PEN PALETTE WORK SCREEN**



- **GLOSSARY OF SYMBOLS:**

– Color Pot

– Points To Active Paint Pot

FORE – Turns Color On in Dark Areas

BACK – Turns Color On in Light Areas

– FORE Color

– BACK Color

C – Contrast Hi/Low

EDIT – Modify FLEXIDRAW Picture

– Color Palette

? – Identifies Color Pot on Work Area

...USING PEN PALETTE

- **SELECTING A PAINT POT**

Select any letter on the menu. The → will confirm the selection.

- **SELECTING PAINT POT COLORS**

1) Choose FORE to color dark areas of the picture and BACK to color light areas.

2) Choose a color from the Color Palette by selecting it with your data input device. The color selected will load into the corresponding half of the Paint Pot:

FORE = ◤ BACK = ◿

After selecting the first color of a Paint Pot, the second half will be automatically filled with the next color selection.

- **ADDING COLOR TO THE WORK AREA**

After selecting a Paint Pot and filling it with color, draw with the data input device over the Work Area to give it color. Choose additional Paint Pots and fill them with colors and repeat until the picture is colored.

- **CHANGING COLORS ON THE WORK AREA**

Once an area has been painted, colors may be changed by:

1) Touching ?

2) Moving the data input device cursor or The Light Pen tip to the place on the Work Area to be changed. The → will move to the corresponding Paint Pot.

3) Select the Paint Pot that corresponds to the → Choose FORE or BACK, then select new colors. All areas on the screen previously painted with that pot will change to the new color.

• GLOBAL SEARCH AND REPLACEMENT OF COLOR

To change all locations of a single color at one time:

1) Press SHIFT and simultaneously select the color to be changed from the Color Palette with the data input device. The → will flash to all locations of that color.

2) Choose the replacement color. It will automatically be painted into all the areas.

• PAINTING OVER RED OR BLACK AREAS

For easier painting over black or dark red areas, especially when using The Light Pen, select C to adjust the contrast and paint as normal. To restore normal contrast, select C again.

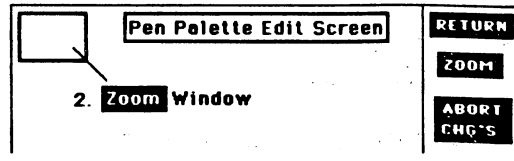
• SINGLE PIXEL EDITING

Use the EDIT command to make single pixel changes to the original FLEXIDRAW picture for proper color placement. Changes may be reseved by using the *PEN PALETTE FILER*.

• ZOOM

1) Choose EDIT.

2) Move the Zoom Window to the area to be edited and select ZOOM.



• ZOOM SCREEN COMMANDS

G/C Toggles between grey tones and color on Work Area.

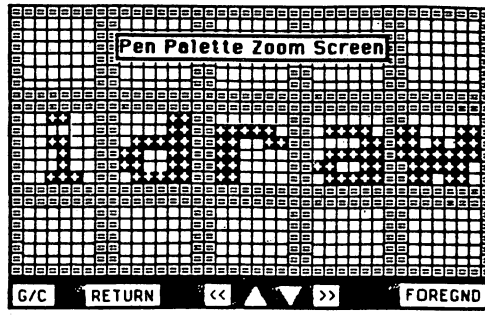
RETURN Returns to Edit Screen.

RETURN Returns to Work Screen.

FOREGND / BACKGND Alternates between drawing colors.

<< ▲ ▼ >> Scrolls Zoom Window

ABORT CHG'S Aborts all zoom changes and returns to Work Screen



PEN PALETTE FILER

The PEN PALETTE Filer allows disk access from PEN PALETTE. It is also used to exit PEN PALETTE and return to the System Menu.

The Filer is accessed by pressing <SHIFT> + <f7>. Select a command by pressing its corresponding number on the keyboard.

• PEN PALETTE DISK FILER COMMANDS

• **1) LOAD A PICTURE FILE**: Loads a FLEXIDRAW format picture for adding color. If the picture has previously had color added with PEN PALETTE, it will reload in color. New pictures are displayed in grey tones.

• **2) SAVE AN EDITED PICTURE**: Resaves the picture currently being displayed which has been edited in the PEN PALETTE **ZOOM** mode.

• **3) SAVE A COLOR FILE**: Saves the color information for a picture to the disk. The color information is automatically stored in a file whose name is the same as the original, plus ".**GP**". If a previously saved picture with color has been edited, this "new" picture must be resaved by choosing "**2)**" and giving it a new name.

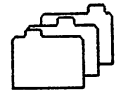
• **4) LIST THE DIRECTORY**: Lists all files on the disk. Color data for pictures are indicated by "**.GP**" extension on the end of the file name.

• **5) RENAME A FILE**: Allows renaming of disk files.

• **6) PRINT A PICTURE**: If a color printer is installed, this command prints the picture. The border area of the screen will change color once for every line of the picture that is sent to the printer.

• **7) RETURN TO PEN PALETTE**: Exits the Filer and returns to the PEN PALETTE Work Screen.

• **8) EXIT FROM PEN PALETTE**: Exits PEN PALETTE and returns to the System Menu. Follow the instructions on the screen.



OTHER SOFTWARE AND HARDWARE AVAILABLE FROM INKWELL SYSTEMS

INKWELL SYSTEMS is proud to feature a growing number of fine products available world-wide through Distributors and Dealers in your neighborhood. These programs and hardware include:

- **FLEXIFONT** - A light pen driven font and character generator

FLEXIFONT is a natural addition to the FLEXIDRAW family. It enables the user to create custom fonts, icons or characters, save them to disk and then use them in FLEXIDRAW. There are 33 font styles available on the disk to use or modify and a FONT CAPTURE Program to allow font files to be collected from Public Domain or non-copy protected Commodore programs and used or modified in the user's own pictures or programs.

- **GRAPHICS INTEGRATOR 2** - A graphics file format conversion program

The GRAPHICS INTEGRATOR 2 is an essential graphics tool which allows the user to convert pictures drawn with one graphics program into other popular graphics program formats on the Commodore 64. This allows the user to combine the benefits and features from many different graphics programs. The program includes all the printer drivers and interface support found on FLEXIDRAW as well as the ability to convert any of the picture formats supported and insert that picture into *PAPER CLIP* or other popular word processing programs which accept external sequential files. The GRAPHICS INTEGRATOR 2 also supports *GEOS* versions 1.2 and earlier.

- **GRAPHICS GALLERIA** - Assorted collections of Clip Art and Pictures in both FLEXIDRAW and *DOODLE!* formats submitted by FLEXIDRAW owners

The GRAPHICS GALLERIA collections feature clip art and pictures submitted by FLEXIDRAW owners for use with FLEXIDRAW, *DOODLE!* or any other graphics program when used in conjunction with GRAPHICS INTEGRATOR 2. Each package features one to four disks with 17 to 18 separate screens per disk that contain both clip art and complete illustrations in beautiful hi-res.

Pictures submitted by registered FLEXIDRAW owners which are chosen for publication have the artist's names published on the accompanying literature inside each package.

...OTHER SOFTWARE AND HARDWARE AVAILABLE FROM INKWELL SYSTEMS

- **THE LIGHT PEN, MODEL 170-C** - The original FLEXIDRAW Light Pen with the nose-tip switch

After a four year run bundled with FLEXIDRAW, The Light Pen, Model 170-C is now available separately. It features a new grey aluminum body, a nose-tip switch and a full two-year warranty. The Light Pen is ideal for use with various programs including: FLEXIDRAW, FLEXIFONT, *GEOS*, *BLAZING PADDLES*, *CADPAK 64* or *128* and *PICASSO'S REVENGE*, to name a few.

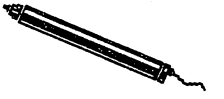
- **THE LIGHT PEN, MODEL 184-C** - A lightweight, triangular shaped light pen with two touch-surface pads for easy use

A delightful, inexpensive alternative to the nose-tip switch 170-C Light Pen, this new model features a tri-lobular shape ergonomically designed for use in either hand as well as two touch-surface pads which act as switches: one for drawing and one to use instead of the <Back Arrow> Key in FLEXIDRAW. **This is the ideal pen for left-handed artists!**

PLEASE NOTE: Both the 170-C and 184-C Light Pen packages feature technical documentation for using light pens with your own programs and several sample BASIC programs showing various light pen operations.

- **THE LIGHT PEN, MODEL 184-A WITH AMIGA LIGHT PEN DRIVER** - "The power of the Amiga with the stroke of a pen"

This new hardware/software combination is a must for all Amiga Computer owners. The Light Pen Driver works under CLI or WORKBENCH. It can be used with, or in place of, the Amiga Mouse, allowing the operator to have the best of both data input worlds. The Light Pen is perfect for graphic artists who find that "It's not natural to draw with a Mouse."



SHOW PICTURE

SHOW PICTURE can be run only if you have The Light Pen.

The SHOW PICTURE Program is used to display black and white or color pictures without having to run FLEXIDRAW or PEN PALETTE. **The program uses light pen menus** to specify the color of the outside border around the picture on the screen. The pictures are displayed centered on the screen.

The SHOW PICTURE Program is particularly useful for videotaping or photographing screen images, as well as for a slide-show presentation effect.

• LOADING THE SHOW PICTURE PROGRAM

Follow the instructions for *LOADING THE SYSTEM MENU*. Choose **SHOW PICTURE** and follow the instructions on the screen.

The program will automatically display a picture in color if it previously has been painted with PEN PALETTE.

• KEYBOARD COMMANDS

- <F3> or <F4>: Changes border colors.
- <F5> or <F6>: Changes background color.
- <F7> or <F8>: Changes foreground.
- <SPACE>: Returns to SHOW PICTURE menu.

PLEASE NOTE: If <F5> through <F8> are pressed while a color picture is on the display, the display will change from full color to monochrome (one foreground/background color).

• POINTING ARROW FOR PRESENTATIONS

When The Light Pen switch is activated while a picture is being displayed, a pointing arrow will appear. This arrow is moved with the light pen away from the surface of the screen. To turn the arrow off, reactivate the pen switch a second time.

• SAVING "STAND ALONE" PICTURES

After pressing <SPACE> bar to return to the SHOW PICTURE menu, the picture that was previously displayed may be saved as a stand alone color picture file. The file loads at location $5000. The first 1024 bytes are color memory, followed by 8192 bytes of bitmap memory (at $6000).

THE FOUR SEASONS

THE FOUR SEASONS is an excellent demonstration of the color graphic capabilities of the Commodore 64.

The picture was drawn by Wayne Schmidt of New York with FLEXIDRAW. Color was added with PEN PALETTE. Color animation of the waterfall and the seasonal changes were designed by Michael Eskin of San Diego.

TO RUN:

Insert Working Copy PICTURE Disk into the disk drive and type:

LOAD "THE FOUR SEASONS",8 <RETURN>

The screen will prompt with:

READY

Then type:

RUN <RETURN>

The program will run continuously.

TO EXIT:

Remove the disk from disk drive and reset the computer.

SPRITE EDITOR

You must have The Light Pen to use the SPRITE EDITOR.

The SPRITE EDITOR is used to create sprites quickly and easily with The Light Pen. These sprites can later be animated with the SPRITE ANIMATOR and the finished sprite sequences can be used in your own programs. This program is located on the PICTURE Disk.

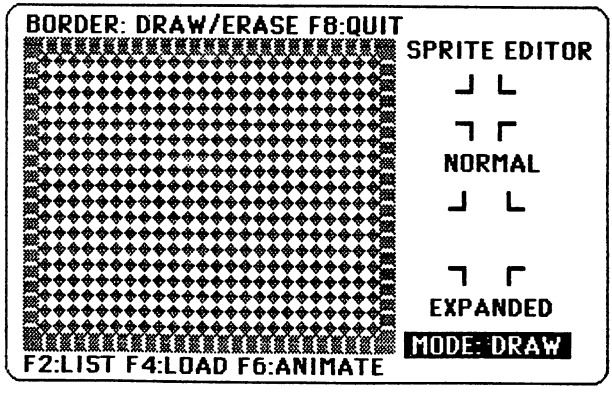
To access, type:

LOAD "*",8 <RETURN>
RUN <RETURN>

The screen will display the SPRITE System Menu:

SPRITE SYSTEM MENU	
1: SPRITE ANIMATOR	☐
2: SPRITE EDITOR	☐
3: EXIT	☐
PLEASE MAKE A SELECTION	

Make your menu selection by using the keyboard or by selecting the corresponding box with The Light Pen. The SPRITE EDITOR Work Screen will appear:



...SPRITE EDITOR

• SPRITE EDITOR OPERATION

• Drawing: Draw the sprite with The Light Pen on the diamond grid. The areas marked **NORMAL** and **EXPANDED** will display the sprite in its normal and expanded size.

• Erasing: Select anywhere on the right or left border with The Light Pen to change **MODE: DRAW** to **MODE: ERASE**. Erase the sprite by drawing over unwanted blocks. Reselect the border area to resume drawing. Press <CLR/HOME> to completely clear the work area.

• Listing/Saving Sprite Values: Press <SHIFT> + <f1> to list values. The sprite values may be listed either to the screen or to a printer and/or saved to disk.

• Loading a Sprite: Load a previously saved sprite file for further editing by pressing <SHIFT> + <f3>. Enter the name of the sprite when asked.

• Chaining to the SPRITE ANIMATOR: Press <SHIFT> + <f5> to chain directly to the SPRITE ANIMATOR.

• Returning to the Sprite System Menu: Press <SHIFT> + <f7>.

SPRITE ANIMATOR

You must have The Light Pen to use the SPRITE ANIMATOR.

The SPRITE ANIMATOR is used to display sprites created with the SPRITE EDITOR sequentially, forming animated "mini-cartoons". This Program is located on the PICTURE Disk.

To access, type:

LOAD "*",8 <RETURN>
RUN <RETURN>

The screen will display the SPRITE System Menu:

SPRITE SYSTEM MENU	
1: SPRITE ANIMATOR	☐
2: SPRITE EDITOR	☐
3: EXIT	☐
PLEASE MAKE A SELECTION	

• AUTOMATICALLY LOADING A SEQUENCE OF SPRITES

After choosing the SPRITE ANIMATOR, the screen will display:

DO YOU WANT TO AUTO-LOAD FILES: ?

A sequence of sprites saved with the SPRITE EDITOR as NAME1, NAME2, NAME3, etc. (where NAME may be anything) may be automatically loaded into the ANIMATOR by answering <Y> and <RETURN>. **There is one example sequence on the disk named MAN, numbered 1 through 8.**

If you answered <Y> to the prompt, the screen will display:

Enter Base File Name:
<RETURN> alone to enter Animator
'$' to list the Disk Directory
'end' to exit to the System Menu

YOUR ENTRY:?

Type the name of the sprite sequence you wish to display (for the Example Sequence, type **MAN**). Press <$> to list the directory of sprites on the disk. To begin animation, press <RETURN> alone when all sequences in the cartoon have

been loaded. Type **END** to exit from the ANIMATOR and return to the SPRITE System Menu.

The screen will display:

ENTER START #?

Enter the number of the first sprite in a sequence saved by the SPRITE EDITOR. For the **MAN** example, Press <1> then <RETURN>

The screen will display:

ENTER END #?

Enter the number of the last sprite in a sequence. For the **MAN** example, type <6> then <RETURN>.

PLEASE NOTE: Entering an END number less than the START number will load the sprites in reverse order.

- **MANUAL LOADING OF SPRITES**

You may load a sequence of sprites in any order by answering <N> to the Auto-Load prompt.

The screen will display:

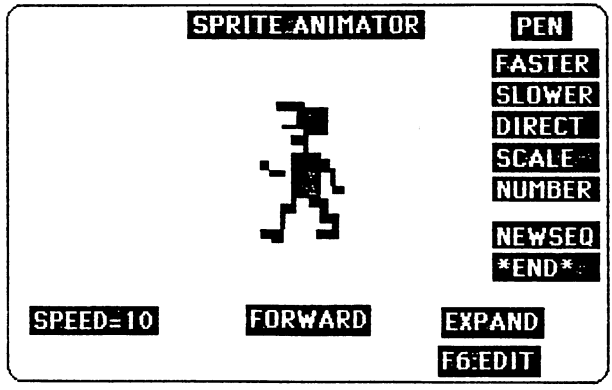
Enter Frame # File Name:
<RETURN> alone to enter Animator
"$" to list the Disk Directory
"end" to exit to the System Menu

YOUR ENTRY:?

Enter a SPRITE File name to load.

After the last frame has been loaded, press <RETURN> to indicate the last frame and start the animation.

The screen will display:



• SPRITE ANIMATOR COMMANDS

The Light Pen commands are on the right side of the screen under **PEN**. The status is displayed in the three boxes at the bottom of the screen.

- Speed Up: Touch **FASTER**
- Slow Down: Touch **SLOWER**
- Reverse Direction: Touch **DIRECT**
- Toggle Small/Large Size: Touch **SCALE**
- Toggle 1/6 Sprites: Touch **NUMBER**
- Start a New Sequence: Touch **NEWSEQ**
- Return to SPRITE System Menu: Touch ***END***
- Chain to SPRITE EDITOR: Press <f6>

• SPRITE ANIMATOR SAMPLE CARTOONS

AUTO LOAD EXAMPLE

To run the Auto-Load sample animation, answer the questions on the screen as follows:

DO YOU WANT TO AUTO-LOAD FILES? Press <Y> then <RETURN>

ENTER BASE FILE NAME, type **MAN** then press <RETURN>

ENTER START #? Press <1> then <RETURN>

ENTER END #? Press <6> then <RETURN>

...SPRITE ANIMATOR

ENTER BASE FILE NAME: Press <RETURN>

This sequence will start the SPRITE ANIMATOR.

- **SPRITE ANIMATOR SAMPLE CARTOONS**
  MANUAL LOAD EXAMPLE

To run a manually loaded sample animation, answer the questions on the screen as follows:

DO YOU WANT TO AUTO-LOAD FILES? Press <N> then <RETURN>

ENTER FRAME #1 FILENAME: Type **MAN1** <RETURN>

ENTER FRAME #2 FILENAME: Type **MAN3** <RETURN>

ENTER FRAME #3 FILENAME: Type **MAN5** <RETURN>

ENTER FRAME #4 FILENAME: Press <RETURN>

For both examples use The Light Pen to practice all of the SPRITE ANIMATOR commands.

TRANSGRAPH

Transgraph is used to transmit picture files via telephone to another Commodore 64, 64C, SX64 or 128 in a remote location. The picture may then be saved or edited and printed with FLEXIDRAW.

Pictures may be transmitted at 300 baud in one of two modes: Normal and Packed.

The Normal mode requires 7 1/2 minutes to send a picture and should be used when the phone lines are of questionable quality such as those used by some budget long-distance services.

The Packed mode compresses the picture before sending it so that transmission time is reduced.

There are some restrictions on using the Packed mode:

- The phone lines must be of *excellent quality*. Poor quality connections will result in garbage being received at the remote location.

- The Packed mode should not be used to send pictures that are very complex. (i.e. made up of pattern fills, halftones, etc.) Compressing a complex picture may not save transmission time since the compressed picture may actually be as large as the original and there is a greater risk of receiving errors.

• RUNNING TRANSGRAPH

Follow the instructions in the *GETTING STARTED* section of this manual to bring up the System Menu. Choose TRANSGRAPH. When the following screen appears, simply make your selection and follow the screen prompts to connect your modem:

```
FLEXIDRAW PICTURE TRANSMISSION SYSTEM

DO YOU WISH TO:

1) TRANSMIT PACKED PICTURE      □
2) TRANSMIT UNPACKED PICTURE    □
3) RECEIVE PICTURE FILE         □
4) FORMAT NEW DISK              □
5) QUIT                         □
```

FLEXIPLOT
HI-RES GRAPHICS FROM BASIC

To utilize the following information you must have a good working knowledge of the BASIC Programming Language.

Included on your FLEXIDRAW Master Disk, PROGRAM Side, is a machine language program called FLEXIPLOT. This program is a set of hi-res drawing subroutines from FLEXIDRAW that have been modified to be easily callable from BASIC programs. These programs give you the ability to quickly clear the hi-res screen, plot points, draw lines and draw circles. Three modes of plotting are provided: Set, Clear and XOR.

• LOADING FLEXIPLOT

Insert a Working Copy of the FLEXIDRAW PROGRAM Disk into the disk drive and type:

LOAD "FLEXIPLOT",8,1 <RETURN>

The program will load into the memory area between 49152 (C000 Hex) and 51200 (C800 Hex).

PLEASE NOTE: The parameters for all commands may be BASIC expressions of any complexity and may contain any number of variables. If you supply the wrong number of parameters to a command, BASIC will generate a **?SYNTAX ERROR** when the program is run.

• FLEXIPLOT SUBROUTINES AND OPERATION

• SET TO HI-RES BITMAP GRAPHICS, CLEAR SCREEN, SETUP COLOR RAM

Entry point: 49152 (C000 Hex)
Format: SYS 49152, BACK, FORE

This routine should be called before doing any hi-res graphics drawing. The routine puts the system in hi-resolution bitmap graphics mode (320 x 200 pixel resolution) with the bitmap located at 8192 (2000 Hex). The routine clears this area and sets all of the bitmap color RAM to the value determined by the background and foreground parameters (0-15).

- SELECT DRAWING MODE:

  Entry point: 49155 (C003 Hex)
  Format: SYS 49155, MODE

This command selects the mode of plotting for all points, lines, and circles. If MODE is set to 0, plotted points will be ORed to the screen (i.e. set to the foreground color). If MODE is set equal to 1, all plotted points will be cleared (i.e. set to the background color). If MODE is equal to 2 or greater, all plotted points will be XORed with the points already on the screen. By changing MODE, you may draw, erase, and even animate your drawings from BASIC.

- PLOT POINT:

  Entry point: 49158 (C006 Hex)
  Format: SYS 49158,X,Y

This routine plots a point on the hi-res screen as called out by the plot MODE.

- DRAW LINE:

  Entry point: 49161 (C009 Hex)
  Format: SYS 49161, X1, Y1, X2, Y2

This routine draws a line between (X1,Y1) and (X2,Y2).

- DRAW TO:

  Entry point: 49164 (C00C Hex)
  Format SYS 49164,X,Y

This command draws a line from the last point plotted with DRAW LINE, DRAW TO, or PLOT TO the point (X,Y)

- DRAW CIRCLE:

  Entry point: 49167 (C00F Hex)
  Format: SYS 49167, XC,YC, R

This routine draws a circle with a given center and radius.

...FLEXIPLOT
HI-RES GRAPHICS FROM BASIC

• FLEXIPLOT ENTRY POINTS AND MEMORY LOCATIONS

To summarize the entry points and memory locations used by FLEXIPLOT:

CLEAR SCREEN:
Entry Point: 49152 (C000 Hex)
Format: SYS 49152, FORE, BACK

PLOT MODE:
Entry point: 49155 (C003 Hex)
Format: SYS 49155, MODE (0: OR 1: CLEAR 2: XOR)

PLOT POINT:
Entry point: 49158 (C006 Hex)
Format: SYS 49158, X, Y

DRAW LINE:
Entry point: 49161 (C009 Hex)
Format: SYS 49161, X1, Y1, X2, Y2

DRAW TO:
Entry point: 49164 (C00C Hex)
Format: SYS 49164, X, Y

DRAW CIRCLE:
Entry point: 49167 (C00F Hex)
Format: SYS 49167, XC, YC, R

• RUNNING THE FLEXIPLOT EXAMPLE PROGRAM, THE 16 LEAF ROSE

To view the example of a FLEXIPLOT 16-leaf rose, reset your system and type:

LOAD "ROSE16.BAS",8 <RETURN>
RUN <RETURN>

The program will draw a 16-leaf rose on the screen. When the rose is completed, exit the program by pressing <RUN/STOP> and <RESTORE> together.

USING FLEXIDRAW PICTURES WITH FLEXIPLOT

To utilize the following information you must have a good working knowledge of the BASIC Programming Language.

To be able to call the pictures drawn with FLEXIPLOT into FLEXIDRAW, the bitmap screen must be saved. This is done with the following sequence of commands:

```
POKE 43, 0 : POKE 44, 32 :
POKE 45, 192 : POKE 46, 63 :
SAVE "Filename",8 <RETURN>
```

USING FLEXIDRAW PICTURES IN YOUR OWN PROGRAMS

To utilize the following informotion for using FLEXIDRAW pictures in your own programs, you must have a good working knowledge of the BASIC Programming Language.

Before a FLEXIDRAW picture may be used in a BASIC program, it must be saved as a Stand Alone File with SHOW PICTURE. The picture will then load at location 23552.

- **TO LOAD A STAND ALONE FILE INTO YOUR BASIC PROGRAM**

```
10  If A=0 then A=1: Load "(picture name)", 8, 1
20  Poke 56, 92 : CLR
30  B=peek (56576) : C=peek (53265) : D=peek (53272)
40  Poke 56576, (peek (56576) and 252) or 2
50  Poke 53265, peek (53265) or 32
60  Poke 53272, 120
```

- **TO GET BACK TO YOUR PROGRAM AFTER LOADING THE FLEXIDRAW PICTURE**

```
70  Poke 56576, B
80  Poke 53265, C
90  Poke 53272, D
```

Substitute your own line numbers as necessary.

DISK ERRORS... *HELP*!

Normally, the disk status shown after doing a Filer function will be **00,OK,00,00**. The following are some possible error messages and how to fix them.

20) READ ERROR: Most likely, the disk is not in the drive or not properly formatted. Put a formatted disk in the drive or use the **FORMAT NEW DISK** Filer command with a new disk.

26) WRITE PROTECT ON: The write-protect tab must be removed from the disk before saving a picture or setting preferences.

62) FILE NOT FOUND: The picture requested is not on the disk or its name is spelled incorrectly. Use the Disk Directory Filer command to check the picture name.

72) DISK FULL: Use another disk or erase some of the existing files before saving.

74) DRIVE NOT READY: First check to see if the disk drive is plugged in and turned on, then List the Directory to fix the problem.

For errors not listed above: Refer to pages 42-46 of the VIC-1541 Single Disk Drive manual for a description of the error.

HARDWARE PROBLEMS

Unlike most software programs, FLEXIDRAW exercises most aspects of the Commodore 64 hardware. **If there is a problem with the hardware, it will show up while running FLEXIDRAW!**

The following are symptoms of hardware problems. If one of these occurs, please test the data input device and software on another Commodore 64 before contacting INKWELL SYSTEMS for an RMA # to return the disk (or The Light Pen) for replacement or repair.

- Lines appear to shoot at random on the screen, or menu items select themselves.
- Random letters appear on the screen.
- Half of Work Area does not respond to the data input device.
- Cursors and targets flicker or disappear at random.
- Sound is absent or distorted.
- Disk drive chatters or is unable to load files.
- Printer doesn't respond. First, check to see that the switches on the printer and the interface are set correctly by referring to the *PRINTING YOUR PICTURES* section in this manual. Second, make sure that you have used the SET PREFERENCES selection to write your appropriate printer driver onto a non-write-protected Working Copy PROGRAM Disk.

GLOSSARY OF TERMS

PIXEL: The smallest dot which can be displayed on the screen.

CHARACTER BLOCK: An 8 pixel x 8 pixel area of the screen.

MENU: A list of program choices located on the right side of the Work Screen.

CURSOR: A movable arrow marker which follows the data entry device and shows its current position on the screen. When text is being entered, a differently shaped text cursor marks the location of the next letter.

TOGGLE/SEQUENCE: To alternate between selections in the same area of the Work Area Menu by repeatedly selecting that area with the data entry device.

CHOOSE/SELECT: To activate the switch of the data entry device in such a way as to cause a reaction from the computer.

IMAGE: The picture or a portion of it on the Work Area.

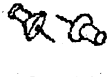
BLACK or **DARK:** The foreground color.

WHITE or **LIGHT:** The background color.

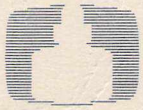
LIGHT PEN: A hand-held electro-optical device used to indicate a specific location on the face of a CRT back to the computer which is driving the CRT. Light pens do *not* emit light.

ZOOM: To magnify individual pixels to character block size for easier editing.

DATA ENTRY DEVICE: An alternative to the keyboard on a computer for entering and manipulating information. Such alternatives include, but are not limited to, light pens, joysticks, mice, track balls, bar code readers, tablets, and touch screens.



Small clip art pictures from the Graphics Galleria by INKWELL SYSTEMS



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